ANNUAL REPORT

OF THE

CITY ENGINEER

TORONTO

1899

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FOR

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TORONTO:
THE CARSWELL CO., LIMITED, CITY PRINTERS, 28 ADELAIDE STREET EAST.
1900.

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TORONTO.

THE CITY OF TORONTO is situated upon the northern shore of Lake Ontario, about 40 miles easterly of its western terminus. It lies in latitude 43° 39′ 10″ north, longitude 79° 23′ west, on a plateau gently ascending north for a distance of three miles, where an altitude of about 220 feet above the Lake level is reached. It extends about eight miles along the Lake, and is generally level, with slight depressions at points where minor water courses formerly existed. The River Don flows through the eastern part of the City, and the River Humber immediately to the west of its western limit. The harbor is formed in front of the City by a sandy island that lies to the south, at a distance of about a mile and a half.

The area within the City limits, not including the portions of the City land covered by water, is 17.17 square miles.

In this area there is a population of about 220,000.

Within the City limits there are 259.03 miles of streets, of which including broken stone roadways, 180.89 miles are paved, and 78.14 miles unpaved.

$84\frac{1}{4}$ miles of lanes.

$231\frac{1}{3}$ miles of sewers.

255 miles of sidewalks.

257.613 miles of water mains.

Actual annual revenue from Water Works, 1899, $452,296.09

7,000,000,000 gallons of water supplied annually.

1,164 electric arc street lamps.

1,000 gas street lamps.

252 miles of gas mains.

207 miles of underground electric conduits.

20,318 miles of overhead and underground electric wires.

117 miles of steam railway tracks.

84.946 miles of single street railway tracks.

The estimated value of property owned by the City is over $12,000,000.

Total gross assessment of property in City	$150,325,122
Total value of property in City exempt from taxation.	22,441,306
Total net assessment of property in City.....	$127,883,816

Value of buildings erected in City during 1899, $2,011,000.

Old City Hall Built 1844, Vacated 1899.

New City Hall, Opened for Public Business September 18th, 1899.

ANNUAL REPORT

OF THE

CITY ENGINEER

OF THE

CITY OF TORONTO

FOR THE YEAR 1899.

CITY ENGINEER'S OFFICE,
Toronto, December 30th, 1899.

To His Worship the Mayor and Members of the Council of the Corporation of the City of Toronto:

GENTLEMEN,—In compliance with By-law 2534, I have the honor to lay before you the Annual Report of the Department for the year ending the 31st of December, 1899, setting forth the various works carried out during the year, with details of cost of construction, etc.

OFFICIAL STAFF.

The following is a list of the chief officials of the Department:

City Engineer, and Chief Engineer and Manager of the Water Works	Charles H. Rust, M. Can. Soc. C.E., M. Am. Soc. C.E.
Deputy City Engineer	C. L. Fellowes, C.E.
Street Commissioner	John Jones.
Asst. Engineer	C. B. Smith, M. Can. Soc. C.E.
Asst. Engineer	J. Williams, M. Can. Soc. C.E.
Asst. Engineer	W. A. Clement, A. M. Can. Soc. C.E.
Asst. Street Commissioner	Wm. J. Evans.
Accountant	Wm. McCartney.
Chief Clerk	E. P. Roden.
Secretary Committee on Works	A. H. Clarke.
Secretary to City Engineer	Geo. J. Castle.
Chief Engineer Main Pumping Station	Alex. McRae.
Chief Engineer High Level Pumping Station	Wm. Hall.
Foreman of Water Works Construction Work	Edward Foley.

WATER WORKS REPORT.

For Water Works matters see separate report.

WORKS DEPARTMENT.

FINANCIAL.

During the year the total expenditure of the Works Department, not including Water Works, was $945,324.26, which was divided as follows:

General works	$235,716 47
Special works	190,221 42
Street railway track allowance pavements	12,149 04
Local improvements	531,472 38
Bridges, subways, etc	29,057 49
Departmental and sundry accounts	36,707 46
Total	$945,324 26

The amount expended for Local Improvement Works was divided as follows:

Pavements and roadways	$441,783 64
Concrete sidewalks	32,892 92
Brick sidewalks	1,945 84
Plank sidewalks	46,353 66
Sewers	8,496 32

The amount expended in 1898, was $796,265.60, showing an increase for 1899 of $149,058.66, or about 15½ per cent. over the amount expended in 1898. The total amount expended by the Department during the year, including Water Works expenditure, was $1,110,807.80. A diagram is attached to this report showing the expenditure during the past ten years.

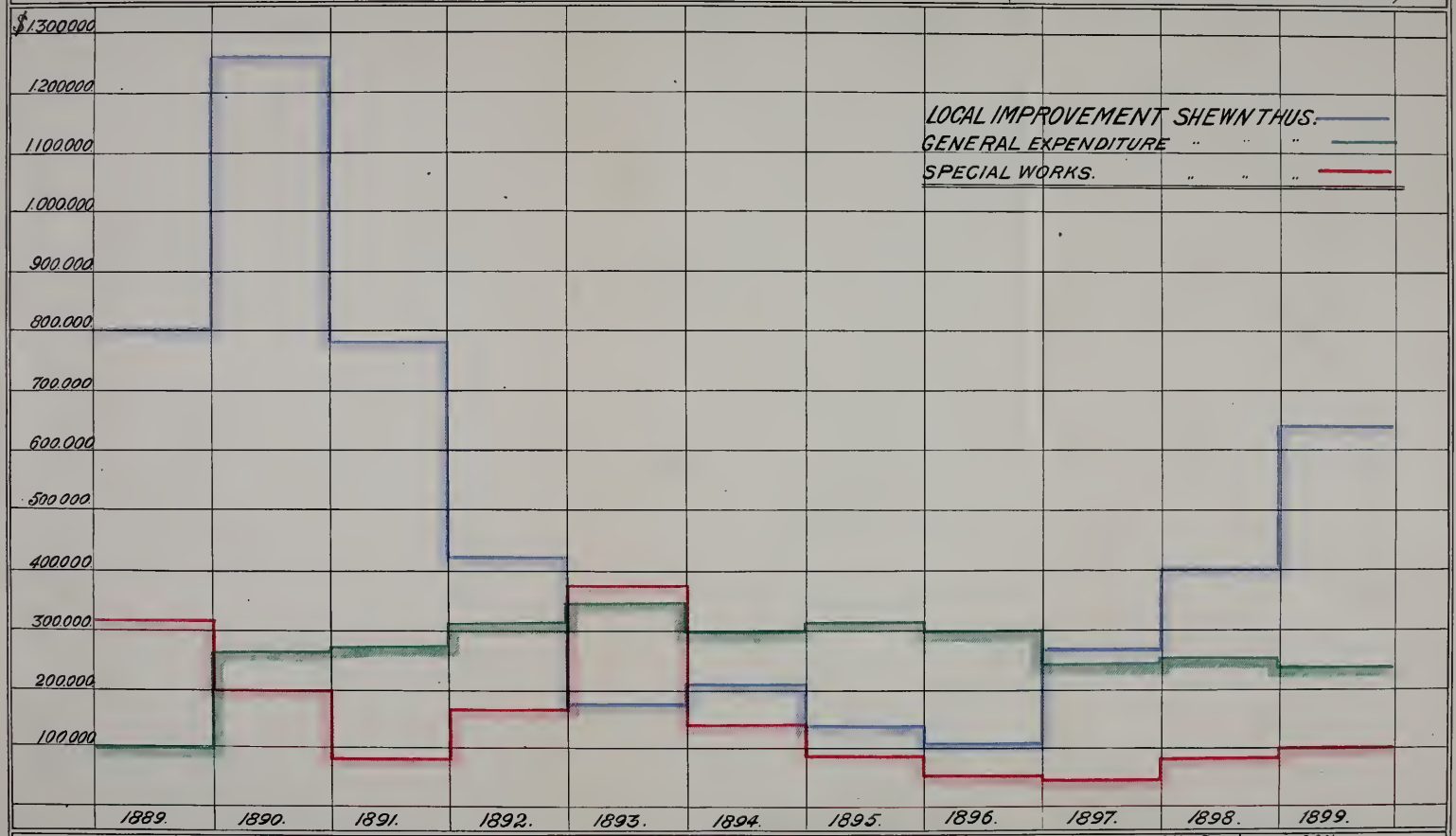
STREET RAILWAY MATTERS.

In the Agreement made in 1891, between the Toronto Railway Company and the City, there are a great many matters which come under the jurisdiction of the City Engineer. In the enforcement of this Agreement, a great deal of work is thrown upon the Department, which occupies considerable time, and it appears to me that it would be advisable to have an official whose sole duty would be to look after all Street Railway matters which are specially mentioned in the Agreement as having to be attended to by the City Engineer.

DIAGRAM ILLUSTRATING YEARLY EXPENDITURE. WORKS DEPMT.

1889—1899.

(NOT INCLUDING WATER WORKS.)



City Engineers Office
Toronto. 1900

As we are constantly receiving requests from outside Municipalities for a copy of the Agreement between the Toronto Railway Company and the City, I have had it printed and bound with this report, which will be found in Appendix " C."

LOCAL IMPROVEMENT WORKS

A great portion of the work carried out during the year has been the construction, as Local Improvements, of pavements, roadways and sidewalks, the cost of which is assessed upon abutting property, the City paying the cost of the portions of such works which are laid opposite flankages and at street intersections. The preparation of the recommendations and By-laws, etc., in connection with these works, involves a great deal of clerical work. It is found that upon streets where pavements have been once laid as local improvements, there is very little opposition, on the part of the property owners, to the construction of new pavements, or roadways, when the old ones are worn out; but upon streets which were improved at the expense of the City generally, before the passage of the Local Improvement Act, it is very difficult to get the property owners concerned to consent to the improvement of these streets upon the Local Improvement plan.

The Local Improvement Act should, in my opinion, be amended so that where a pavement or roadway on any public street is so worn out as to be dangerous to public traffic and the City Engineer's recommendation for the construction of a new pavement, as a local improvement, has been successfully petitioned against by the property owners concerned, the City Engineer shall have power to recommend the same work a second time, and, provided the second recommendation is confirmed by a two-thirds vote of the members of the Council present and voting, the pavement or roadway shall then be proceeded with, notwithstanding the reception of a fully signed petition against the work. As the law is at present, the City Engineer's recommendation for the construction of a pavement or roadway can be successfully petitioned against by a majority of the owners of abutting property.

The Act has already been amended so that in cases where the construction of plank sidewalks is recommended by the City Engineer and petitioned against, the walks may be recommended a second time and the work proceeded with, after being sanctioned by a two-thirds vote of the members of Council present and voting.

In the construction of sidewalks, the Department is frequently called upon to decide upon the best and most desirable position in which to place the walks, as the property owners sometimes disagree upon this point, some wishing to have them laid next the curb line and others wishing to have them laid in the old positions. It would, I think, be advisable to have a definite policy regarding this matter, and I am of opinion that except upon business streets, where the sidewalks are laid upon all the space between the street line and the curb, the walks should be laid at least eighteen inches inside the curb line, so as to allow space for the erection of poles. It has been the practice in the past to frequently place the sidewalk planks on top of or close to the wooden curb, but when it was necessary to replace this with a more permanent curb, it was found that a great deal of unnecessary expense had to be incurred in removing and relaying the walk to enable the stone or concrete curbing to be set.

In my opinion, the time has arrived when no more plank walks or crossings should be laid upon the public streets.

POWERS OF ELECTRICAL COMPANIES.

I desire to again call attention to the necessity for the Council to adopt a definite policy regarding the powers exercised on our public streets by the various Electrical Companies doing business in the City. The Bell Telephone Company and the Toronto Electric and Incandescent Light Company, have now a considerable quantity of underground work constructed in the public streets. No doubt the time will come when the Toronto Railway Company will be compelled to put their feed-wires underground, and the most satisfactory way of doing this would be for the City to construct subways in our principal streets, and rent ducts therein to this, as well as other Companies wishing to place their wires in them. The occupation of the public streets by underground conduits, and poles and wires, which are owned and controlled by these private corporations, makes it almost impossible for any other Company to become established in the City and enter into competition with the existing Companies. Legislation should therefore be obtained so that the City would be in a position to regulate and control the powers of these corporations upon the public streets, and I am of opinion that the City has grown to such an extent that the services of a competent Electrical Engineer should be employed to look after all these matters.

BRIDGES.

During the year contracts were awarded to the Hamilton Bridge Works Company for the erection of three steel highway bridges at the following points, viz.: crossing the Don River at Queen Street, and also at Eastern Avenue, and crossing the Humber River at the Lakeshore Road. The following are the dimensions and size of these bridges:

Queen Street—125-ft. span, 42-ft. roadway, 2 10-ft. sidewalks.

Humber River Bridge—160-ft. span, 22-ft. roadway, 1 7-ft. sidewalk.

Eastern Avenue Bridge—132-ft. span, 22-ft. roadway, 2 7-ft. sidewalks.

The contract for the abutments of the Queen Street Bridge was awarded to Mr. W. S. Gibson, the contract price being $13,900. The contractor's time for completion, having expired on the 14th of November, and as he was not carrying out the work as expeditiously as we considered necessary, it was taken out of his hands and completed by the Department, the total cost of the work being $11,940.

As there was considerable masonry in the old abutments, we specified that stone ashlar, founded on concrete and piles, be used on the west side. On the east bank of the river the foundations were carried down to the rock. At the Eastern Avenue and Humber River Bridges, concrete was used with very satisfactory results. Mr. A. J. Brown was the contractor for the abutments of the Eastern Avenue Bridge, the total cost of the work being $7,446. The concrete, which consisted of Portland cement in the proportions of one to eight, cost about $6 per cubic yard. The same contractor had the contract for the Humber River Bridge abutments, where the concrete cost about $5.50 per cubic yard, the total cost of the work being $4,473.15. All these abutments were founded on piles. On the Eastern Avenue Bridge the steel work is partly completed, but on the other two bridges no steel has yet been delivered on the ground, and these bridges will not be completed until the summer of 1900.

In connection with the above work, the Department constructed temporary pile trestle bridges crossing the Don River at Queen Street and Eastern Avenue. The piling was done by contract, but the superstructures were constructed by the Department by day labor, a great deal of the timber used being taken from the old wooden

Howe truss bridge, which formerly crossed the Don at Eastern Avenue. The roadway on the Eastern Avenue temporary bridge was eleven feet wide, with one sidewalk four feet wide, and the Queen Street temporary bridge was made wide enough to carry two street car tracks and a sidewalk eight feet wide.

In addition to the above work, various repairs were made to the different bridges, details of which will be found in the report of the Assistant Engineer on Bridge work.

Lamb's Draw Bridge has been subjected to much heavier traffic than the bridge was designed for, and it will be necessary to replace it with a new structure.

Considerable damage was done by freshets, to the eastern crib in the centre of the channel at the Cherry Street Bridge, and it will be reconstructed.

The Glen Road Bridge was in a very dangerous condition, the cast-iron posts for the hand-rail resting on timber joists only, which were very much decayed. These were replaced by 12-in. I beams, placed transversely to the bridge so as to carry it to the hand-rail posts, a cast-iron extension piece being introduced between the I beams and posts, to bring the sidewalk to the necessary level, and an entirely new deck was laid.

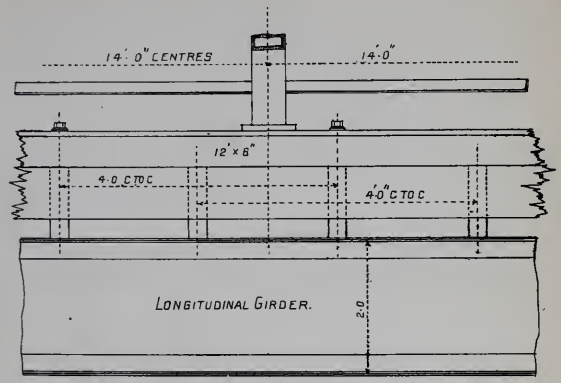
SEWERS.

During the year, 6,954 lineal feet of sewers, of all sizes, were constructed. There are now 231⅓ miles of sewers, of all kinds, in the City.

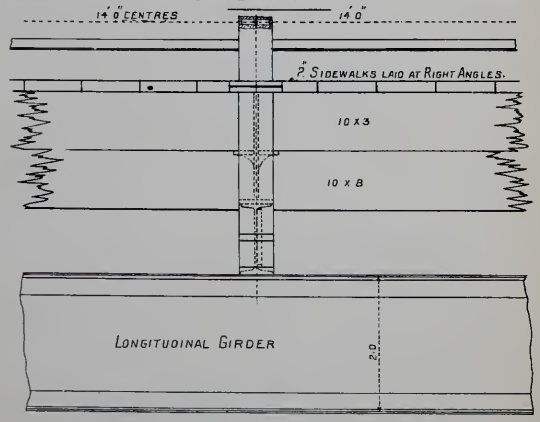
There was 17,122 feet of 6-in. drains and 1,235 feet of 9-in. drains constructed for house purposes, that is, from connections with the main sewer in the centre of the street, to the street line.

For further information regarding these matters, reference should be made to the report of the Assistant Engineer in charge of Sewer work.

GLEN ROAD BRIDGE.

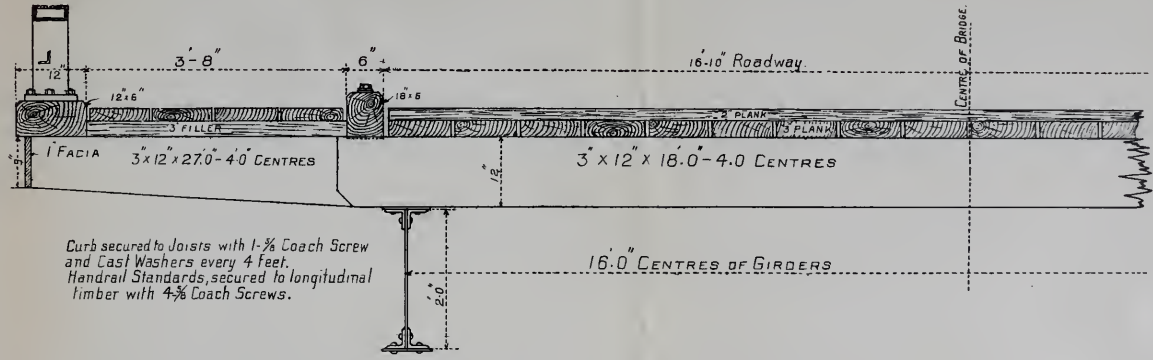


SIDE ELEVATION



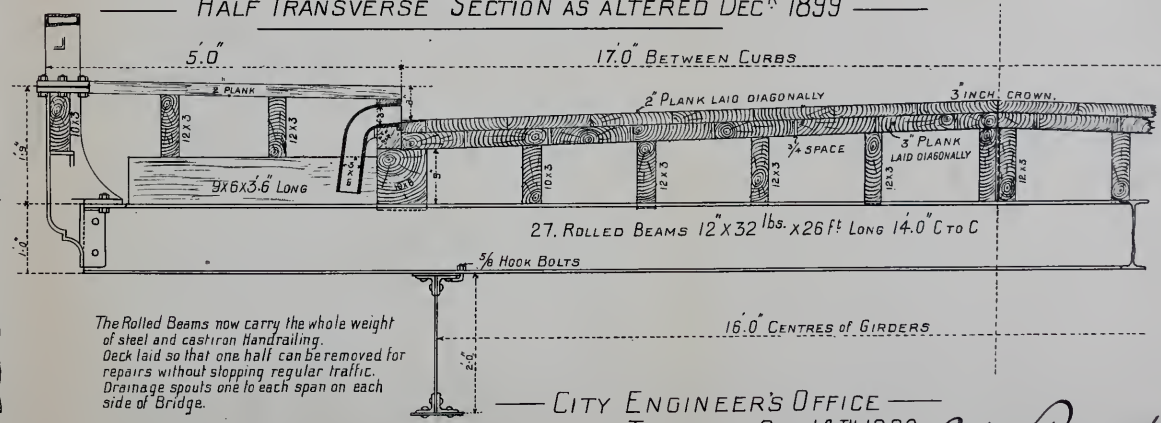
SIDE ELEVATION.

HALF TRANSVERSE SECTION AS ORIGINALLY BUILT.



Curb secured to Joists with 1-⅜ Coach Screw and Cast Washers every 4 feet. Handrail Standards, secured to longitudinal timber with 4-⅜ Coach Screws.

HALF TRANSVERSE SECTION AS ALTERED DEC.R 1899



The Rolled Beams now carry the whole weight of steel and cast iron Handrailing. Deck laid so that one half can be removed for repairs without stopping regular traffic. Drainage spouts one to each span on each side of Bridge.

CITY ENGINEER'S OFFICE
TORONTO OCT. 14TH 1899 C.H. Rust
City Engineer

AREAS AND COAL CHUTES.

On the 27th of June, 1898, the City Council directed, under authority of the Municipal Amendment Act of 1897, chap. 45, s. 21, that all Areas and Coal Chutes in the City be taxed.

The City, for this purpose, has been divided into three districts, lettered A, B, and C, which are constituted as follows:

District A.—That portion of the City bounded by the Bay on the south, Jarvis Street on the east, Shuter and Albert Streets on north, and Simcoe Street on the west.

District B.—That portion of the City lying immediately east, north and west of District A, and extending east to Parliament Street north to Bloor Street, and west to Bathurst Street.

District C.—All the remaining portions of the City situate outside the limits of Districts A and B, above described.

The following is a statement of the number of areas and coal chutes in each of the above districts:

District A....	96,890	square feet	areas;	100	coal chutes.
" B....	32.112	"	"	240	"
" C....	11,323	"	"	102	"
Total ..	140,325	"	"	442	"

The following rentals are charged in the various districts:

District A—For areas, 4 cents per square foot per annum.
" B— " 3 cents " "
" C— " 2 cents " "

For coal chutes in each district, 50 cents per annum each.

The above charges produce a revenue of $5,286.42 per annum.

PAVEMENTS AND ROADWAYS.

Although the mileage of pavements and roadways constructed during the past year is a little less than that of 1898, it will be seen by reference to the report of the Assistant Engineer in charge of this work, that it is of a much more permanent character. The mileage of Gravel roadways has fallen from 4.756 miles constructed in 1898 to 0.069 of a mile constructed in 1899. There has been a steady increase in the quantity of asphalt pavement laid each year, the figures being 0.37 of a mile in 1896: 0.46 of a mile in 1897; 3.4 miles in 1898, and 6.2 miles in 1899.

The total length of pavements, of all kinds, laid during the year, is 21.120 miles, and of concrete and brick sidewalks, 5.766 miles.

In connection with these improvements, 118 contracts were awarded in 1899, in addition to 12 carried over from 1898. The Department was given 26 contracts, our tenders being the lowest received, and the works were done by day labor. In addition to this, 30 private works were superintended, making a total of 186 separate works carried out and superintended by the Pavement and Roadway branch of the Department, during the year.

In the construction of Asphalt pavements, all the material used during the past six years has been Trinidad Pitch Lake Asphalt, and since 1896 contractors have had to guarantee their pavements for ten, instead of five years, as formerly; fifteen per cent. of the amount of their contracts being retained during this period. This extended period of maintenance has been found to work very satisfactorily. A great deal of the asphalt between the street railway tracks, which was laid in 1892 and 1893, became so worn that it was impossible to repair it. This was taken out and replaced with bricks and scoria blocks.

In the construction of brick pavements, during the past year, a foundation of broken stone has been used instead of gravel, upon some streets where the traffic is light, but a foundation of concrete is still used on a majority of the streets paved with bricks. The bricks were laid diagonally with the direction of the street, and an inch board placed between the curb and the pavement until the completion of the work, when it was removed and the space filled with paving pitch. This was done to, if possible, lessen the noise, which has been one of the great objections to this class of pavement. The pitch will also allow expansion to take place without arching the pavement.

Upon several streets where the property owners could not afford to pay for a first-class pavement, the old cedar blocks have been taken up and new ones laid on the existing gravel foundations. The cost of this work is from 50 to 60 cents per square yard, and it has given satisfaction. These pavements will remain in good condition for six or seven years, at the end of which time the property owners concerned, will probably be able to bear the expense of the construction of a much better class of pavement.

With reference to macadam roads, the quality and quantity of macadam supplied has not been satifactory to the Department, and I think the time has arrived when the City should purchase and operate a stone quarry. One or two quarries have been examined with this object in view, but the difficulty is to get a quarry within such a reasonable distance of the City that the freight rates would not make the cost of the material so high as to prohibit its use. If a quarry could be procured on the shores of Lake Ontario, so that the stone could be delivered by water, it would be much more satisfactory than having a quarry inland. The Department was also somewhat hampered this year in not having another steam road roller, but the Council has awarded the contract for an additional one, which I trust will be delivered and ready for work in the spring.

During the past year, the City Engineer has submitted tenders for the various works, which were opened with those received from the different contractors, with the result that the Council ordered the Department to carry out several works by day labor. This practice of tendering by the Department, works well, and acts as a check upon the contractors in case they wish to form a combine to increase prices. It would, however, if this practice is to be continued, be to the advantage of the City to largely increase the existing City plant, so that the Department would be in a position to proceed with the work more expeditiously and economically than can now be done.

In the report of the Assistant Engineer in charge of Pavement and Roadway work, there is a statement of the Day Labor Works carried out by the Department, comparing the cost of these works with the figures contained in the tenders received, which were the next lowest to those submitted by the Department, by which it will be seen that the sum of $2,584 was saved to the property owners concerned, by reason of the contractors reducing their tenders, after the Department had been ordered by the Council to carry out these works by day labor, and taking the contracts therefor at the figures mentioned in the tenders of the Department; and that the sum of $5,786.44 was saved, and $1,760.43 lost, which leaves a net saving of $4,026.01 to the property owners concerned, in the execution of these Day Labor Works by the Department.

In the paving of the track allowance on King Street, from Sherbourne Street to Simcoe Street, which the Department took out of the

contractors' hands, work was carried on day and night, and the existing asphalt pavement was replaced with scoria blocks, $3\frac{1}{2}$ inches by 4 inches by 8 inches. On a portion of this track allowance only the $2\frac{1}{2}$ inches of the asphalt surface was removed, and a surface of concrete substituted, which was composed of one part of the best Portland cement to two parts of crushed granite. A row of scoria blocks were placed, as stretchers, on each side of the rails. Thus far this work has proved very satisfactory, and it is our intention to do a great deal more of it in the future.

TRAFFIC ON MAIN BUSINESS STREETS.

In connection with our main business streets, there is a very important matter which will shortly have to be considered and dealt with, viz., the necessity of relieving the ever-increasing traffic on these streets, by properly paving parallel streets to Yonge Street and Queen Street. Victoria Street if properly paved, even as far as Gerrard Street, would very much relieve the conjestion of traffic now existing on Yonge Street, at Queen Street, especially between twelve and one o'clock in the forenoon, and after six p.m. Teraulay Street should also be paved, and, if possible, opened through to Grenville Street, so as to form a connection with St. Vincent Street. If this were done, and St. Vincent Street, Chapel Lane and North Street properly paved, it would further assist in relieving Yonge Street of traffic. Adelaide Street and Defoe Street should also be placed in good condition from Jarvis Street to Shaw Street, and if the proposed Cross Town Line of street railway is constructed, the paving of the track allowance would prove of great utility to bicyclists, and have a tendency to relieve Queen and College Streets of a large portion of traffic.

SIDEWALKS.

The construction of sidewalks of a permanent character has greatly increased. This is largely owing to the City Council, upon the recommendation of the City Engineer, prohibiting the laying of plank sidewalks in a certain section of the City, which, I think, might be extended with good results. Concrete and brick sidewalks are now constructed at such a reasonable figure, that, by extending the time for payment over ten years, the annual assessment on the property owners concerned, is no more than what the annual assessment for a plank walk would be, payment for which has to be made in three years.

HARBOUR SQUARE CRIBBING
1899

In the report of the Assistant Engineer in charge of this work, will be found a number of tables concerning pavement and roadway work.

SEWAGE DISPOSAL.

During the past year this matter has been again under consideration, and the Sewage Disposal Works at Madison, Wisconsin, and also the small septic tank at Champaign, Ill., were visited by me and a report made to the City Council regarding the matter.

CITY SAND PUMP.

The City sand pump commenced work on the 17th of April, and continued working until the close of navigation. The cost of operating the pump for the entire season, was $4,089.25, and the quantity of material excavated, 56,134 cubic yards, or 7.28 cts. per cubic yard.

HARBOR SQUARE CRIBWORK.

The contract was awarded to W. J. Bryce for the construction of some 1,200 feet of cribwork, enclosing an area on the water front of nearly four acres, the expenditure upon which, up to the end of the year, was $25,361.

STREET COMMISSIONER'S DEPARTMENT.

The Street Commissioner has charge of the construction of plank sidewalks, repairing of macadam, cedar block and unimproved roadways, cleaning of street gullies, street cleaning, street watering and scavenging, which work is all carried out by day labor.

Full information regarding the work performed by this Department, can be had by reference to the report of Mr. John Jones, Street Commissioner, which is attached hereto. In his report is given an outline of the system of the collection and disposal of garbage, etc., which was read by him at the meeting of the American Society of Municipal Improvements, held in this City in October last, which is very interesting reading.

Respectfully submitted.

C. H. RUST,
City Engineer.

PAVEMENTS, ROADWAYS AND CEMENT CONCRETE SIDEWALKS.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 30th, 1899.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—Herewith I submit the Annual Report, showing in detail the work done under the supervision of the Pavement and Roadway Branch of the Works Department.

Although the mileage of pavements and roadways constructed during the year 1899 is a little less than that of 1898, it will be seen by reference to Table No. 2 that it is of a much better class: the mileage of gravel roadways having fallen from 4.756 miles in 1898 to 0.069 of a mile in 1899, and asphalt increased from 3.4 to 6.2 miles. The total length of pavements laid during the year is 21.120 miles and 5.766 miles of concrete and brick sidewalks.

In connection with these improvements, 118 contracts were let in 1899 and 12 were carried over from 1898. In addition to these, the City being the lowest tenderer in several cases, 26 works were ordered to be done by day labor and 30 private contracts for cement concrete walks were superintended, making a total of 186 separate works carried out by this Department, which are classified in the following table:

TABLE No. 1.

Class of Work.	*No. of Works.*
Asphalt	30
Brick on concrete	13
Brick on gravel	4
Brick on broken stone	6
Cedar block on concrete	1
Cedar block on gravel	18
Gravel	1
Macadam	24
Tamarac block on concrete	1
Reconstruction of track allowances (brick and scoria)	5
Concrete sidewalks	49
Brick sidewalks	4
Private contracts (sidewalks)	30
Total	186

The above works and those which were proposed, but not carried out, necessitated the preparing of 150 plans and 757 estimates.

TABLE No. 2.

MILEAGE OF DIFFERENT CLASSES OF PAVEMENTS, ROADWAYS AND SIDEWALKS LAID FROM 1890 TO 1899.

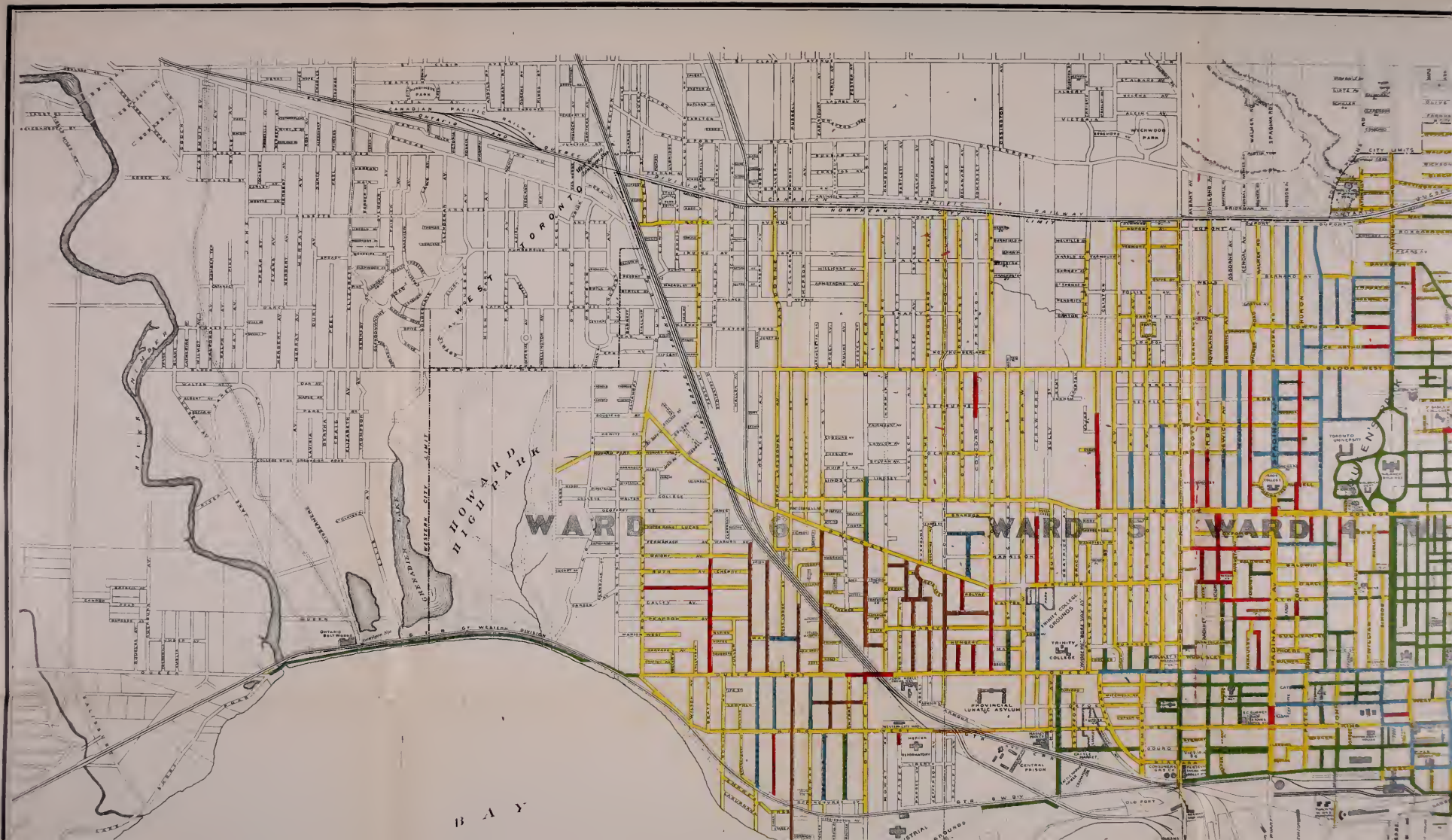
Class of Work.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Pavements and Roadways.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Asphalt	1.73	1.635	6.216	5.607	3.067	1.156	0.366	0.460	3.408	6.215
Cedar block on sand and plank foundation	15.51	9.186	3.349	3.249	0.852	1.753	0.428	2.459	4.831	3.151
Macadam	...	0.123	0.494	.....	0.059	1.663	1.661	0.510	2.089	5.013
Cobble	0.10	0.069	0.366	.....	.....	.....	.....	.....	.....	.....
Tamarac on concrete	0.192	0.077	.....	.....	.....	.....	.....	.....	.....	0.067
Cedar block on concrete	.....	.....	8.416	2.185	0.826	0.227	0.038	.....	0.084	0.079
Stone setts on concrete	.....	.....	0.705	3.743	2.563	0.085	.....	.....	.....	.....
Scoria blocks on concrete	0.138	.....	0.028	.....	.....	0.117	.....	.....	2.986	1.367
Brick on concrete	.....	.....	.....	3.964	0.787	0.744	1.032	5.803	6.079	3.670
Brick on gravel	.....	.....	.....	.....	.....	.....	0.028	0.838	0.352	0.943
Brick on broken stone	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.546
Concrete pavements in lanes	.....	.....	.....	.....	.....	0.071	.....	.....	0.057	.....
Gravel	.....	.....	.....	.....	.....	.....	.....	3.138	4.756	0.069
Totals	17.670	11.090	19.574	18.748	8.154	5.816	3.553	13.208	24.642	21.120
Sidewalks.										
Concrete	1.426	1.930	1.508	2.259	1.137	1.918	0.612	1.050	2.548	5.474
Stone flag	1.273	0.398	0.104	0.035	0.011	.....	.....	.....	.....	.....
Brick	.....	.....	.....	.....	.....	.....	0.204	0.823	1.188	0.292
Totals	2.699	2.328	1.612	2.294	1.148	1.918	0.816	1.873	3.736	5.766

The first pavements and roadways laid under the Local Improvement system, were constructed during the year 1881, and the annual variation in the mileage of paved and unpaved streets, with classification of same up to the end of the year 1899, is shown in the following Table No. 3:

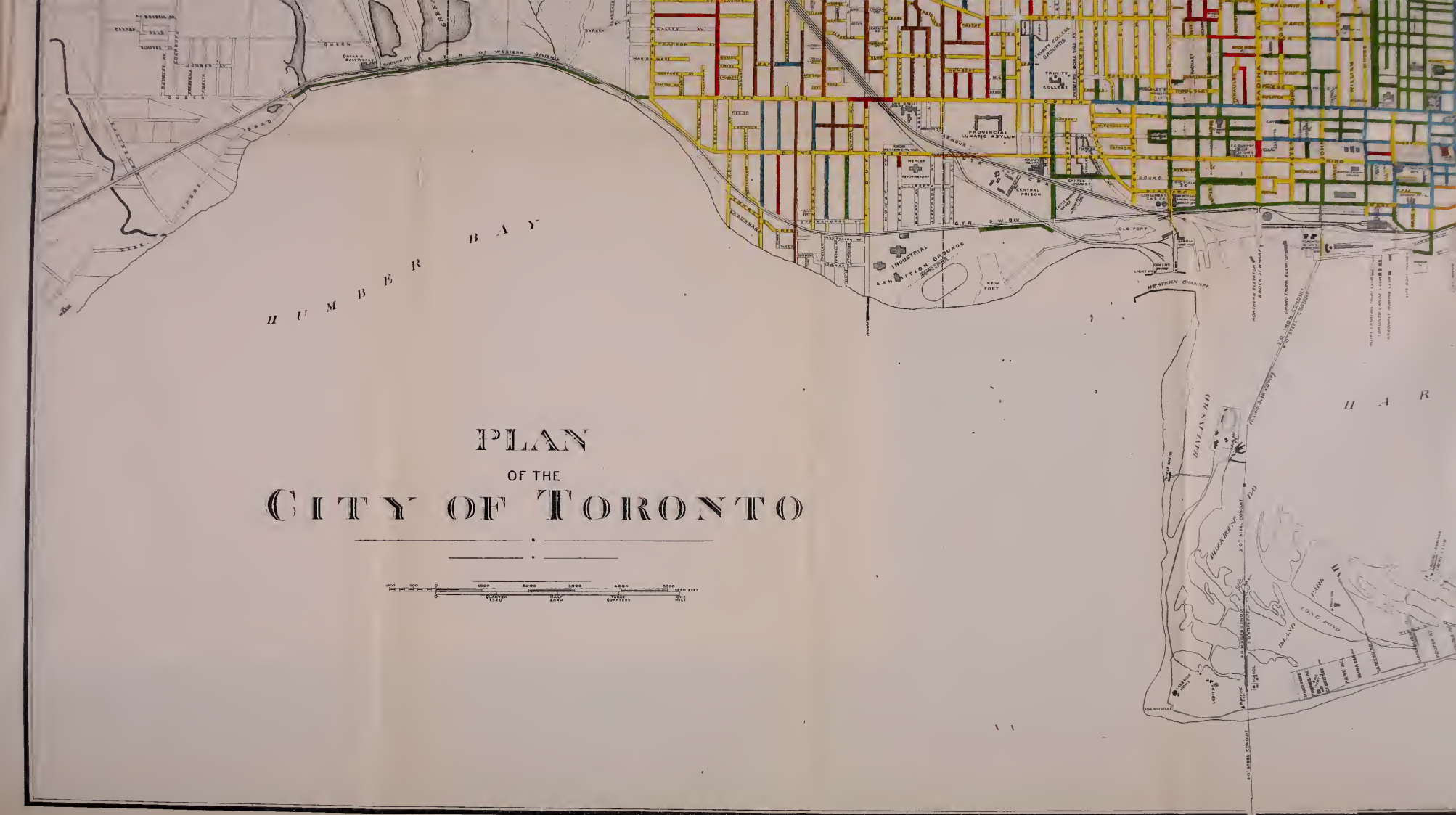
TABLE No. 3.

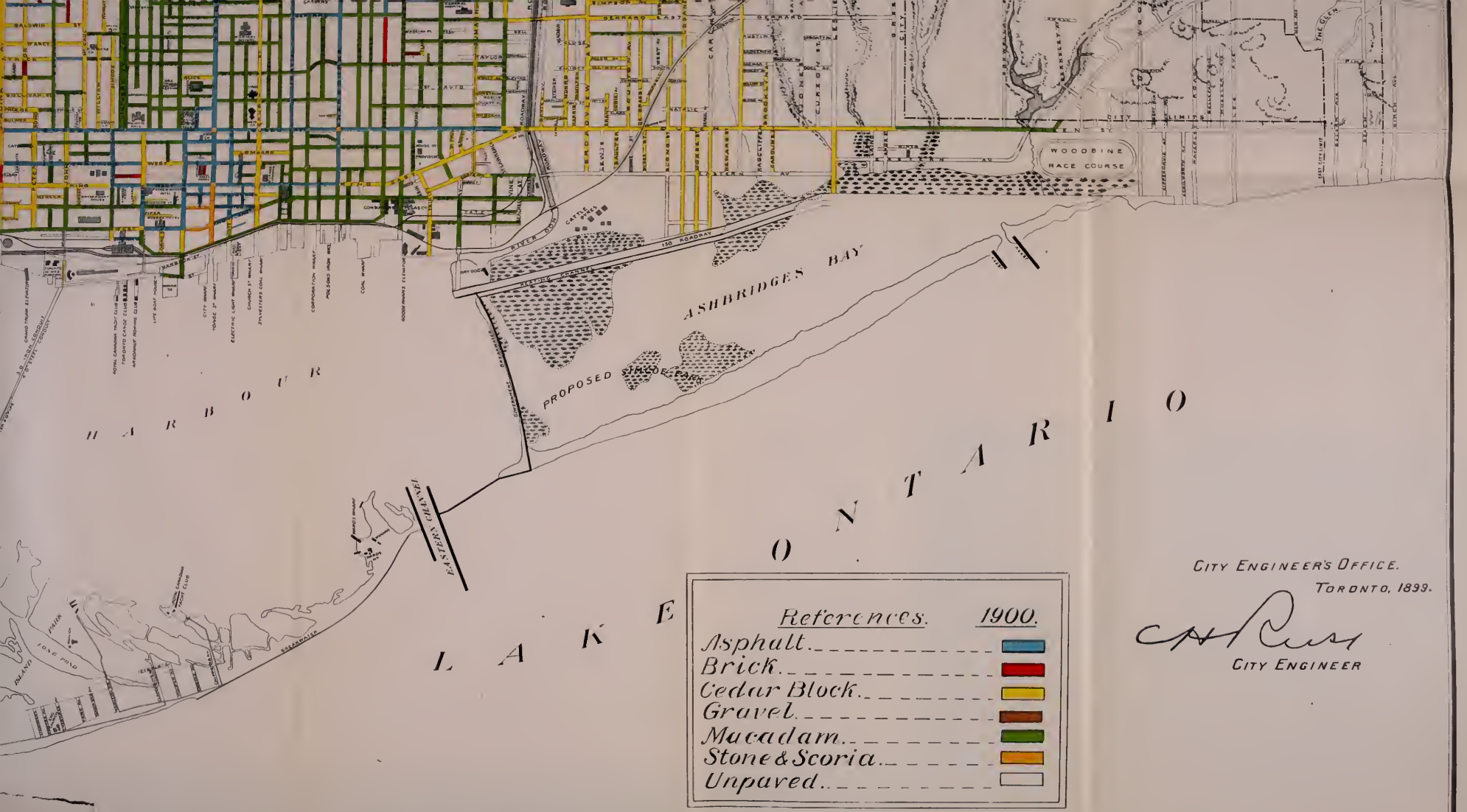
SHOWING THE DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS AND MILEAGE OF SAME FROM 1881 TO 1899.

Year.	Cedar Block.	Stone and Scoria.	Asphalt.	Wood on Concrete.	Macadam.	Cedar Block with Asphalt on Track Allowance.	Cedar Block with Brick on Track Allowance.	Macadam with Stone Setts on Track Allowance.	Brick.	Gravel.	Unpaved.	Total Mileage.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1881	3.51	0.03	.....	.....	50.92	.....	.....	.....	.....	.....	62.39	116.85
1882	13.41	0.03	.....	.....	48.28	.....	.....	.....	.....	.....	55.13	116.85
1883	26.90	0.03	.....	.....	54.57	.....	.....	.....	.....	.....	54.07	135 57
1884	33.76	0.25	.....	.....	52.32	.....	.....	.....	.....	.....	76.77	163.10
1885	39.84	0.25	.....	.....	50.17	.....	.....	.....	.....	.....	75.98	166.24
1886	48.99	0.36	.....	.....	47.36	.....	.....	.....	.....	.....	72.18	168.89
1887	64.11	0.36	0.07	.....	45.14	.....	.....	.....	.....	.....	59.21	168.89
1888	79.55	0.36	0.25	.....	42.76	.....	.....	.....	.....	.....	49.87	172.79
1889	92.39	0.36	3.36	.....	38.65	.....	.....	.....	.....	.....	107.43	242.19
1890	109.57	0.36	5.08	.....	36.63	.....	.....	.....	.....	.....	90.55	242.19
1891	116.83	0.59	6.66	0.49	36.39	.....	.....	.....	.....	.....	89.44	250.40
1892	116.86	0.65	10.49	0.49	36.98	2.35	.....	.....	.....	.....	84.89	252.71
1893	112.19	0.79	11.28	0.49	34.98	7.06	3.97	0.54	.....	.....	82.05	253.35
1894	111.16	0.81	13.70	0.49	35.95	6.35	4.50	0.54	.....	.....	79.98	253.48
1895	109.78	0.81	14.38	0.49	39.15	6.35	4.85	0.73	0.38	.....	79.48	256.40
1896	108.70	0.81	14.61	0.53	39.71	6.35	4.93	0.70	1.32	.....	79.74	257.40
1897	101.36	0.81	15.07	0.53	40.50	5.42	8.28	1.08	3.58	3.22	78.45	258.30
1898	94.90	0.65	18.30	0.61	41.91	3.73	7.43	1.26	5.91	4.56	78.67	257.93
1899	81.77	0.65	24.33	0.67	45.03	3.15	10.52	0.97	8.77	5.03	78.14	259.03


WARD 6
WARD 5
WARD 4
TORONTO
WEST TORONTO
HOWARD PARK
HIGH PARK
BAY
CANADIAN PACIFIC RAILWAY
NORTHERN RAILWAY
CITY LIMITS
TRINITY COLLEGE
PROVINCIAL LUNATIC ASYLUM
CENTRAL PRISON
TORONTO UNIVERSITY
QUEEN'S PARK
WYCHWOOD PARK
DUFFERIN
DUNDAS
QUEEN
KING
YONGE
BLOOR
COLLEGE
BATHURST
SPADINA
ROSEDALE
DON
HUMBER

WARD 3
WARD 2
WARD 1
RIVERDALE PARK
TODMORDEN
ROSEDALE
RIVER DON
DON MILLS RD
WOODVILLE AV
TORRENS AV
GAMBLE AV
GERRARD AV
CARLTON AV
SALMON AV
MANDOLFO AV
QUINN AV
RUDD AV
CENTRAL AV
CHERRY
CITY LIMITS
DANFORTH ROAD
GRAHAM
MOUNTJOY AV
BLAKE AV
PLEASANT AV
ROSE HILL AV
OLIVE AV
RESERVOIR
PARNHAM AV
WOODLAWN AV
WALDER AV
WICKSON AV
DITCH AV
DICKSON AV
SUMMERHILL AV
RIDGE DRIVE
SUNNYSIDE AVENUE
BIN BEARTH RD
LANSDOWNE PL
ROXBOROUGH WEST
ROXBOROUGH EAST
PEARS AV
DAVENPORT
SCOLLARD
HAYDEN
ST MARY
ST BASILS COLLEGE
ST JOSEPH
ST MICHAEL'S
ST JAMES CHURCH
CHURCH
ALEXANDER
MAITLAND
SUFFOLK
MONTAGUE
WELLESLEY AV
GLENDENAN AV
HORTICULTURAL GARDENS
GENERAL HOSPITAL
ISOLATION HOSPITAL
JAIL
NORMAL SCHOOL
MADEIRA PL
BELL
AYLMER
WYATT AV
ELEVINS
ST DAVID
ARMSTRONG
ROBINSON
LOWATT AV
WALMER
HOUSE OF PROVIDENCE
CONSUMERS GAS CO
EASTERN
CATTLE BYES
DRY DOCK
RIVER DON
150 ROADWAY
KEATING CHANNEL
ASHBRIDGES BAY
CANADIAN PACIFIC RAILWAY
DON VALLEY BRICK WORKS
BAY VIEW AV
LESLIE
DON MILLS
ROADWAY
CITY WHARF
YONGE ST WHARF
ELECTRIC LIGHT WHARF
CHURCH ST WHARF
STEVENSON'S COAL WHARF
CORPORATION WHARF
POLSONS IRON WKS
COAL WHARF
GOODERHAMS ELEVATOR
YORK STATION
GRAND TRUNK RAILWAY FREIGHT YARD
YORK STATION
GRAND TRUNK RAILWAY
LAKE VIEW AVE
LAKE DRIVE
COLEMANS CORNER
STEPHENSON AVE
GERRARD
KINGSTON ROAD
EAST TORONTO
THE GLEN
WOODBINE RACE COURSE
EASTERN AV
EAST CITY LIMIT
BEACH
KIPPENDAVIE AV
KENILWORTH AV
WAVERLEY


PLAN
OF THE
CITY OF TORONTO
HUMBER BAY
HARBOUR
INDUSTRIAL EXHIBITION GROUNDS
PROVINCIAL LUNATIC ASYLUM
CENTRAL PRISON
TRINITY COLLEGE
TRINITY COLLEGE GROUNDS
OLD FORT
NEW FORT
WESTERN CHANNEL
BAYLIS RD
BUKARIEW
LOSE POND
ISLAND
G.T.R.
G.W.R.
C.P.R.
1000 500 0 1000 2000 3000 4000 5000 5280 FEET
0 QUARTER 1320 HALF 2640 THREE QUARTERS ONE MILE



CITY ENGINEER'S OFFICE.
TORONTO, 1899.

CITY ENGINEER

TABLE No. 4.

SHOWING PERCENTAGE OF DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS IN THE CITY.

Cedar block	31.57	per cent.
Stone and scoria	.25	"
Asphalt	9.39	"
Brick	3.39	"
Wood on concrete	.26	"
Macadam	17.38	"
Gravel	1.94	"
Cedar block with asphalt between tracks	1.22	"
Cedar block with brick between tracks	4.06	"
Macadam and stone setts between tracks	.37	"
Unpaved	30.17	"
	100.00	"

ASPHALT PAVEMENTS.

Asphalt continues to increase in favor, the number of miles laid this year being 6.2, which shows a very marked increase over the 3.4 miles laid last year; 0.46 of a mile in 1897, and 0.37 of a mile in 1896.

All the asphalt used during the last six years has been "Trindidad Pitch Lake," and since 1896 we have required the contractors to guarantee and keep the pavements in repair for ten years from the date of their completion; 15 per cent. of the amount of the contract being retained during that time.

This extended period of maintenance has been found very beneficial, as we are now getting a very high grade of asphalt work. The first pavements, which were laid under a ten-year guarantee, have been down now nearly four years, and show no signs of deterioration.

The quantities, prices and other details connected with the asphalt pavements laid this year, may be seen by reference to Tables Nos. 7 and 8.

The sections of streets paved with asphalt, on which the contractors' terms of guarantee have expired, will be found in Table No. 5. These pavements are being kept in repair at the general City expense, the repairing being done by contract at $1.34 and $1.24 per square yard for $2\frac{1}{2}$-inch and 2-inch surface respectively.

TABLE No. 5.

SHOWING STREETS PAVED WITH ASPHALT UPON WHICH THE CONTRACTORS' GUARANTEES HAVE EXPIRED.

Street.	From	To	Length. Feet.	Date of Expiry of Guarantee.
Bay	King	Front	932	Nov. 20, 1893
Jarvis	Queen	Bloor	6,734	Oct. 1, 1894
St. George	Bloor	Bernard	2,025	Oct. 9, 1894
Wellington	Church	Yonge	900	June 28, 1894
Sherbourne	Queen	Bloor	6,786	June 1, 1895
Simcoe	King	Queen	1,182	Aug. 1, 1895
St. George	Bernard	Dupont	966	June 14, 1895
Ontario	Carlton	Howard	2,824	July 28, 1895
Sherbourne	King	Queen	1,160	July 2, 1895
Bloor	Yonge	Sherbourne	2,661	Nov. 18, 1895
Scott	Front	Colborne	374	Nov. 7, 1895
Wellington	Bay	York	848	July 18, 1896
Gerrard	Jarvis	Sherbourne	934	July 24, 1896
Melinda	Yonge	Bay	587	Aug. 5, 1896
Jordan	Wellington	King	379	Aug. 5, 1896
Sherbourne	The Bridge	South Drive	1,076	Nov. 11, 1896
Bay	King	Queen	1,175	Aug. 15, 1896
St. George	College	Bloor	3,286	Sept. 25, 1896
Toronto	N. line stone pav't	Adelaide	349	May 1, 1897
Adelaide	York	Spadina	3,001	July 21, 1897
Victoria	King	Adelaide	414	Sept. 1, 1897
Rose	Howard	Winchester	2,134	Sept. 1, 1897
Yonge	King	Hayter	4,000	Nov. 9, 1897
St. James	Ontario	Parliament	595	Sept. 7, 1897
Yonge	Hayter	Grenville	944	Nov. 14, 1897
Devonshire Pl.	Hoskin	Bloor	1,228	Sept. 30, 1897
Yonge	Grenville	Bloor	3,099	Nov. 25, 1897
Richmond	Victoria	Bay	852	June 27, 1898
Earl	Sherbourne	West terminus.	634	July 13, 1898
Winchester	Parliament	Sumach	1,512	Aug. 24, 1898
Munn's Lane	Wellington	218 feet north.	218	Aug. 23, 1898
Czar	Yonge	North	666	Sept. 25, 1898
College	Yonge	McCaul	2,806	Sept. 28, 1898
Parliament	Queen	Gerrard	2,490	Sept. 27, 1898
Parliament	Winchester	Carlton	466	Sept. 22, 1898
Parliament	Gerrard	Carlton	880	Sept. 23, 1898
Lane around Inland Revenue Office			265	Oct. 5, 1898
York (track allow.)	Front	Queen	2,066	Oct. 18, 1898
Linden	Sherbourne	Huntley	585	Oct. 21, 1898
Hoskin	St. George	Queen's Pk Cr.	1,130	June 27, 1899
Carlton	Jarvis	Sherbourne	937	June 7, 1899
Queen	Yonge	River	6,084	July 14, 1899
Bleeker	Carlton	Wellesley	1,412	July 5, 1899
Wellesley	Sherbourne	Parliament	1,227	Sept. 25, 1899
Cecil	Spadina	Beverley	1,052	Sept. 27, 1899
McCaul	Queen	College	3,384	Nov. 5, 1899
Adelaide	Yonge	Church	903	Nov. 8, 1899
King	Simcoe	Sherbourne	4,999	June 15, 1899

BRICK PAVEMENTS.

There has been a slight decrease in the brick pavement work this year, the total length being 5.2 miles, and a little over six miles in each of the preceding years. The foundation on which the bricks have been laid has been mostly four inches of Portland cement concrete, as will be seen by referring to Table No. 2, the balance being on either gravel or broken stone.

Broken stone, as a foundation, is gradually being adopted in the place of gravel, and should produce better results, for it can be rolled into a much more solid and unyielding mass, as gravel has a great tendency towards crowding, or forming a wave in front of the roller.

The bricks in all our pavements this year have been laid diagonally with the direction of the street, an inch board being placed between the curb and the pavement until the brick work is completed, then this board is removed, and the space filled with boiling paving pitch.

The laying of the bricks diagonally and the pitch filling has been done with the object of alleviating the objectionable noise, the pitch being soft during hot weather, when the pavement is liable to expand, it may allow the expansion to take place without arching the pavement, and possibly prevent the hollow rumbling sound caused by vehicles.

All the details regarding the brick pavements laid during the year may be seen by reference to Tables 7 and 8.

CEDAR BLOCK PAVEMENTS.

The amount of cedar block pavement laid this year is less than that of 1898, being 3.3 miles and five miles the year before, nearly all of it has been the relaying of existing, but worn-out roads of this class. There are two exceptions, however, viz., Bay Street and Scott Street, which were laid on concrete foundations, and for details see Tables Nos. 7 and 8.

Table No. 6 shows those sections of streets on which the final assessment for pavements has been paid, or will be paid, during the ensuing year. On a large proportion of the streets in the following table, the pavements are beyond repair.

TABLE No. 6.

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Abbs	Brock	West terminus	C. B.	1891	1896
Adelaide	York	Spadina	Asphalt.	1892	1900
Albany Av	Bloor	Wells	C. B.	1889	1899
Alexander	Church	McMillan	"	1884	1894
Alice	Yonge	Teraulay	"	1889	1899
Allan Av	Broadview Av.	Bolton Av	"	1887	1897
Alma Av	Gladstone Av.	Dufferin	"	1887	1897
Argyle	Dundas	Givens	"	1887	1897
Argyle	Givens	Shaw	"	1887	1897
Argyle	Dundas	Gladstone	"	1895	1900
Arthur	Euclid Av	Bridge	"	1886	1897
Arthur	Dundas	Bridge	"	1884	1895
Augusta Av	Nassau	College	"	1886	1896
Augusta Av	St. Patrick	Nassau	"	1889	1898
Avenue Pl	Avenue Rd	Hazelton Av	"	1887	1897
Avenue Rd	Davenport Rd.	N. City St. limit.	"	1890	1900
Baldwin	Beverley	Spadina Av	"	1895	1900
Balmuto	Bloor	Czar	"	1884	1895
Barton Av	Palmerston Av.	Euclid Av	"	1892	1897
Barton Av	Manning Av	Euclid Av	"	1890	1900
Bathurst	S. s. Bridge	N. Ry. gate	"	1886	1897
Bathurst	College	Bloor	"	1884	1895
Bathurst	College	Queen	"	1889	1898
Bathurst	Bloor	C. P. Ry	"	1890	1900
Bay	King	Front	Asphalt.	1889	1898
Bay	King	Queen	"	1891	1899
Bedford Rd	Bernard Av	Davenport Rd	"	1889	1898
Bedford Rd	Bloor	Lowther	"	1890	1900
Belmont	Yonge	Davenport Rd	"	1887	1897
Bellwoods Av	Queen	Mansfield	"	1883	1892
Bernard Av	Bedford Rd.	St. George	"	1889	1899
Berryman	Davenport Rd.	Hazelton Av	"	Yorkville	1897
Birch	Yonge	West terminus	"	1890	1900
Bishop	Davenport Rd.	West terminus	"	1886	1896
Bismarck Av	Yonge	Gwynne Av	Macad'm	1891	1897
Bismarck Av	Gwynne	East end	C. B.	1891	1897
Bleeker	Wellesley	Howard	"	1893	1898
Bloor	Yonge	Sherbourne	Asphalt.	1890	1900
Bloor	Avenue Rd.	Bathurst	C. B.	1889	1900
Booth Av	Queen	Eastern Av	"	1891	1896
Booth Av	Queen	G. T. Ry	"	1889	1899
Borden	Ulster	Bloor	"	1886	1897
Boswell Av	Avenue Rd.	West terminus	"	1886	1897
Bridge	Bloor	Elm Av	"	1890	1900
Brighton	Pape Av	East end	"	1890	1899
Broadview Av.	Withrow Av	Danforth Av	"	1890	1898
Broadview Av.	Queen	Gerrard	"	1887	1897

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Broadview Av.	Gerrard	Withrow Av	C. B.	1887	1897
Broadview Av.	Queen	Eastern Av	"	1891	1896
Brook	Logan Av	Howland Rd	"	1888	1898
Brooklyn	Queen	North end	"	1887	1897
Brock	Muir	College	"	1888	1898
Brock	Dundas	College	"	1888	1895
Brown(now Seaforth Av.)	Brock	West terminus	"	1891	1896
Brownsville La.	St. Joseph	St. Alban	"	1889	1900
Bruce	Shaw	Givens	"	1892	1897
Brunswick Av.	Bloor	Wells	"	1889	1899
Brunswick Av.	Ulster	Sussex	"	1884	1895
Brunswick Pl.	Walmer Rd	Brunswick Av	"	1890	1900
Buchanan	Yonge	Teraulay	"	1883	1892
Bulwer	Spadina	Soho	"	1889	1899
Casimir	St. Patrick	N. to a lane	"	1889	1898
Callendar	Queen	North terminus	"	1890	1898
Carlaw Av	Queen	Eastern Av	"	1889	1899
Carlaw Av	Eastern Av	The Bay	"	1885	1897
Carlaw Av	Eastern Av	South end	"	1885	1897
Carlton	Sumach	East end	"	1886	1897
Caroline	Queen	Eastern Av	"	1889	1899
Carr	Esther	End of Carr	"	1894	1899
Cawthra Sq	Jarvis	West end	"	1891	1897
Cherry	Sorauren Av	Roncesvalles Av.	"	1888	1898
Christie	Bloor	Melville	"	1891	1898
Church	King	Gerrard	"	1886	1897
Church	King	Front	"	1887	1897
Church	Gerrard	Bloor	"	1887	1897
Churchill Av	Term. of Pav't.	136 feet east	"	1893	1898
Clarence	Wellington	North end	"	1886	1897
Clara	Oak	Orford	"	1886	1896
Claremont	Robinson	Mansfield Av	"	1887	1897
Clinton	473 ft. s. of Bloor	891 ft. s. of Bloor	"	1891	1897
Clifford	Stafford	Strachan Av	"	1887	1897
Clyde (now Baldwin.)	Spadina Av	Augusta Av	"	1887	1897
College	Dufferin	Lansdowne Av	"	1888	1896
College	Beverley	Spadina Av	"	1882	1892
College	McCaul	Beverley	"	1883	L'd by City
College	Spadina Av	Bathurst	"	1884	1894
College	McCaul	Yonge	"	1885	L'd by City
College	Ossington Av	Bathurst	"	1887	1897
College	Ossington Av	Dufferin	"	1887	1897
College, s.s.	Spadina Av	Augusta Av	"	1890	1899
Coolmine Rd	Dundas	St. Anne's Rd	"	1889	1899
Cottingham	Yonge	Avenue Rd	"	1886	1896
Cottingham	Rathnally Av	Poplar Plains Rd	"	1889	1899
Cottingham	Avenue Rd	Rathnally Av	"	1889	1899
Cowan Av	King	G. T. Ry	"	1890	1900
Crawford	Queen	Defoe	"	1890	1900

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Crocker Av....	Bellwoods Av..	Claremont	C. B....	1890	1900
Cross	Gladstone Av..	Beaconsfield Av..	"	1888	1898
Dale	McKenzie Av..	Glen Rd. Bridge.	"	1889	1899
D'Arcy	McCaul	Spadina Av.....	"	1895	1900
Darling	North terminus	End of sewer....	"	1891	1896
Davenport Rd.	Avenue Rd....	West City limit..	"	1886	1896
Davenport Rd.	Hazelton Av ..	Avenue Rd.....	"	1889	1899
Davenport Pl..	Davenport Rd.	End of street....	" .. .	1888	1898
Davies Av	Queen.....	Matilda	"	1893	1899
Dean	Wilton	200 feet north...	"	1886	1896
Defoe	Tecumseth	Niagara.....	"	1890	1900
DeGrassi.....	Queen	Gerrard	"	1892	1897
Delaware Av ..	College	Bloor	"	1886	1897
Delaware Av ..	Bloor	VanHorne	"	1891	1897
Dewson.....	Ossington Av..	Dovercourt Rd ..	"	1890	1900
Dorset	King	Wellington.....	"	1883	1894
Dovercourt Rd.	Dundas	College	"	1884	1894
Dovercourt Rd.	College	Bloor	"	1889	1894
Dovercourt Rd.	Queen.....	Blair	"	1890	1899
Dowling	Queen.....	Hawthorne.....	"	Parkdale	1897
Draper	Front	Wellington Pl ..	"	1884	1894
Dufferin	Queen.....	G. W. Div. G.T.R	"	1889	1898
Dunbar Rd....	Elm Av	Hill.....	"	1890	1900
Duncan (now Wright.)	Macdonnell Av.	Sorauren Av	"	1891	1899
Duncan (now Wright.)	Sorauren Av ..	Roncesvalles Av.	"	Parkdale	1897
Dundas	Ossington Av..	Jameson Av	C. B. & Cobble.	1887	1897
Dundas	Sorauren Av ..	Bloor	C. B. & Granite.	1893	1898
Dupont	Bathurst.....	Manning Av	C. B....	1892	1897
Dupont	Avenue Rd....	Bedford Rd	"	1890	1897
Earl.....	Sherbourne ...	West terminus ..	Asphalt.	1893	1898
Earnbridge....	Birch	East terminus ..	C. B....	1888	1899
Eastern Av....	Trinity	Water.....	"	1889	1899
Edmund.....	Royce.....	C. P. Ry.....	"	1893	1898
Elm Av.....	Bridge.....	Glen Rd.....	"	1888	1899
Elmsley Pl....	St. Joseph	North terminus..	"	1890	1900
Emily	Brock	Maude..	"	1888	1899
Emily	St. Clarens Av.	Brock	"	1888	1899
Euclid.....	Bloor	Johnston	"	1890	1898
Euclid.....	Ulster.....	Bloor	"	1888	1899
Euclid Pl	Euclid Av	East terminus ..	"	1892	1899
Evans Av.....	Clinton	West terminus ..	"	1893	1898
Farley Av	Tecumseth	Niagara	"	1889	1898
Farley Av	Bathurst.....	Tecumseth	"	1889	1899
Frankish Av ..	Brock Av	Sheridan.....	"	1889	1899

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Frederick (now Saunders.)	Soraurен Av ..	Fuller	C. B....	1888	1898
Frizzel	Carlaw Av	Pape Av.....	"	1890	1900
Front	York	Simcoe	C. B. & Stone Setts.	1888	1899
Fuller	Queen	North limit	C. B....	Parkdale	1897
Garden Av....	Soraurен Av ..	Macdonnell Av.	"	Parkdale	1897
Gerrard.....	Broadview Av.	Howland Rd	"	1888	1897
Gildersleeve Av	Sumach	East end	"	1893	1899
Givens	Argyle.....	Halton	"	1889	1899
Gordon Av....	Dale Av	Elm Av	"	1890	1899
Grafton Av....	RoncesvallesAv	East end	"	1891	1899
Grant	Queen.....	North terminus..	"	1890	1900
Halton	Shaw	Dundas	"	1892	1897
Hamburg Av..	Bloor	Union	"	1890	1899
Hamilton	Paul	Elliott.....	"	1890	1899
Harbord	Markham	Bathurst.....	C. B. & Gravel.	1889	1899
Harris (now Hamilton.)	Queen.....	Paul	C. B....	1891	1896
Harrison.....	Ossington Av..	Lakeview Av....	"	1889	1899
Harvard	RoncesvallesAv	Callendar	"	1888	1898
Hayden	Church	East end.....	"	1890	1897
Hayden	Yonge.....	Church	"	1890	1900
Henderson....	Clinton	Manning Av	"	1886	1896
Henderson....	Clinton	Grace	"	1891	1898
Herrick	Bathurst.....	Lippincott	"	1892	1897
Heward Av ...	Queen.....	Eastern Av.....	"	1889	1899
High Park Av.	RoncesvallesAv	High Park.....	C. B. & Gravel.	1892	1899
Howie.....	Clark	North end	C. B....	1889	1899
Howland Av ..	Bloor	Wells	"	1889	1899
Howland Av ..	Wells	C. P. Ry.....	"	1890	1900
Howland Rd ..	Gerrard	North terminus..	"	1888	1898
Huron.....	St. Patrick ...	Cecil	"	1887	1897
Huron.....	Cecil	College	"	1886	1897
Huron.....	Phœbe	Grange Av.....	"	1893	1898
Huron.....	Lowther	Bernard	"	1890	1900
Huron.....	Bernard	Dupont	"	1890	1900
Jameson Av...	Dundas	Shirley	"	1888	1898
Jameson Av...	Dundas	Bloor	"	1889	1899
Jarvis	Queen.....	Bloor	Asphalt.	1889	1899
John	King	Queen.....	C. B....	1890	1900
John	King	Front	Macad'm	1895	1899
Jordan	Wellington....	King	Asphalt.	1891	1899
Kensington Cr.	Park Rd.....	Huxley	C. B....	1891	1896
King	Simcoe	Strachan Av	"	1883	1894

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
King	Sherbourne	Don River	C. B.	1883	1894
King	Strachan Av.	Armour	"	1891	1896
King	Dufferin	Queen	"	Parkdale	1897
King	Dufferin	3,000 ft. easterly.	Tamarac & Scoria	1890	1899
Lane bet'n St. Patrick and D'Arcy.	Huron	Beverley	C. B.	1892	1897
Lane s. of Pearl	Near Simcoe		Cobble.	1892	1897
Lane e. Spadina Av.	Grange Av.	St. Patrick	"	1892	1897
Lane bet. Duke and Duchess.	Ontario	West terminus	C. B.	1886	1896
Lane s. of Pearl	Simcoe	York	"	1892	1897
Lane bet. Yonge and Victoria.	Gould	Wilton Av	Cobble.	1887	1897
Lane bet. Yonge and Victoria.	Adelaide	106 feet south	"	1892	1897
Lane 1st w. of Bay.	S. of Wellingt'n		C. B.	1889	1897
Lane bet. York and Simcoe.	N. of Pearl	Near Adelaide	"	1888	1898
Lane 1st n. of Queen.	Mutual	Jarvis	"	1888	1898
Lane n. of Wilton Cr.	Pembroke	George	"	1888	1898
Lane bet. Queen and Richmond	Church	East terminus	Cobble.	1888	1898
Lane s. of Queen	Tecumseth	Niagara	"	1893	1898
Lane rear of John.	Adelaide	Lane near Arlington Hotel.	C. B.	1893	1898
Lane e. of Bay.	Wellington	214 feet south	"	1888	1899
Lane 1st e. of Bay.	Wellington	Melinda	Concrete	1895	1900
Lane n. of Foxley.	Foxley	135 feet north	C. B.	1889	1899
Lane 1st s. of Queen.	Simcoe	Duncan	"	1889	1899
Lennox	RoncesvallesAv	Easterly limit	"	Parkdale	1897
Leopold	Jameson Av.	Lot 19	"	Parkdale	1897
Leopold	Dowling Av.	Lot 19	"	Parkdale	1897
Lippincott	Nassau	College	"	1885	1896
Lippincott	Ulster	Bloor	"	1885	1896
Lobb Av.	Shaw	Crawford	"	1890	1900
Logan Av.	Queen	Ashbridge's Bay.	"	1889	1898
Logan Av.	Queen	Gerrard	"	1889	1899
Logan Av.	Gerrard	Danforth Av	"	1889	1899
Lombard	Victoria	Jarvis	"	1888	1898
Lowther Av	Bedford Rd.	Term. of Pav't	"	1889	1898
Lowther Av	Bedford Rd.	St. George	"	1890	1898
Lowther Av	Brunswick Av.	Howland Av	"	1892	1898
Lowther Av	St. George	Walmer Rd	"	1890	1900
Lucas	Sorauren Av	Roncesvalles Av.	"	1892	1897

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
McGee	Queen	Eastern Av.	C. B.	1885	1896
McKenzie Av.	Dale Av	Castle Frank	"	1886	1897
McKenzie Cr.	Dovercourt Rd.	Lisgar	"	1886	1898
McKenzie	Lisgar	Beaconsfield	"	1890	1900
McMaster	Avenue Rd.	Rathnally Av.	"	1890	1900
McPherson Av.	Term. of Pave't	Avenue Rd.	"	1889	1898
McPherson Av.	Avenue Rd.	Rathnally Av.	"	1890	1900
Manning Av.	Arthur	Bloor	"	1886	1897
Manning Av.	Arthur	Queen	"	1889	1898
Manning Av.	Bloor	Hammond Pl.	"	1890	1900
Mansfield Av.	Bellwoods Av.	Clinton	"	1884	1894
Mansfield Av.	Manning Av	Clinton	"	1893	1898
Mansfield Av	Bellwoods Av.	Grace	"	1893	1899
Maple Grove Av	Carlton	Sackville Pl	"	1888	1899
Margueretta	Dundas	Bloor	"	1889	1898
Marion	Soraurен Av	Fuller	"	1888	1898
Marion	Lansdowne Av.	Macdonnell Av.	"	1891	1899
Markham	Queen	College	"	1885	1896
Markham	Harbord	Bloor	"	1889	1898
Marlborough Av	Yonge	West end	"	1889	1899
Massey	King	Wellington	"	1887	1897
Massey	King	Queen	"	1891	1897
Maude	Adelaide	Farley	"	1887	1897
Maude	Emily	Brock	"	1889	1899
Maynard Av	King	Leopold	"	Parkdale	1897
Melinda	Bay	Yonge	Asphalt.	1891	1899
Mercer	John	Peter	C. B	1885	1896
Metcalf	Carlton	Winchester	"	1885	1896
Metcalf	Winchester	Amelia	"	1888	1895
Middleton Av.	Sheridan Av	Brock	"	1889	1898
Millstone Lane.	York	East end	"	1889	1899
Mitchell Av.	Tecumseth	Niagara	"	1889	1899
Morris	Spadina Av.	Huron	"	1890	1900
Morse	Queen	Ashbridge's Bay.	"	1886	1897
Montague Av. (now Triller.)	Queen	Harvard	"	1889	1899
Montague Pl	Homewood Av.	West end	"	1893	1898
Munroe	Queen	Gerrard	"	1887	1897
Napier	Munroe	Lane	"	1891	1896
New	Davenport Rd.	West end	"	1889	1899
Niagara	Bathurst	King	"	1885	1896
Niagara	King	Queen	"	1887	1897
Noble	Brockton Rd.	East limit	"	Parkdale	1897
North Drive	Rosedale Rd	Woodland Av.	C. B. & Gravel.	Yorkville	1897
Northcote Av.	Queen	Afton Av	C. B.	1895	1900
Northumberl'd.	Ossington Av.	Preston	"	1893	1898
O'Hara Av.	Present Term.	Railway tracks	"	1892	1897
Olive	Bathurst	Palmerston Av	"	1893	1898
Ontario Pl	Ontario	270 feet west	"	1886	1896

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Ontario	Carlton	Howard	Asphalt.	1890	1900
Orde	McCaul	Murray	C. B.	1889	1899
Ossington Av.	Bloor	C. P. R	"	1892	1897
Ossington Av.	Harrison	Bloor	"	1888	1899
Ossington Pl.	Ossington Av.	West end	"	1889	1899
Ottawa	Shaftesbury Av	Summerhill Av.	"	1889	1899
Oxford	Augusta Av	Spadina Av.	"	1895	1900
Palmerston Av.	College	Arthur	"	1884	1896
Palmerston Av.	Arthur	Robinson	"	1884	1896
Palmerston Av.	Bloor	Union	"	1890	1899
Pape Av.	Queen	Danforth	"	1887	1897
Park Rd.	Woodland	Rosedale Rd	Cedar & Gravel.	Yorkville	1897
Parkview Av.	Wellesley	North terminus.	C. B.	1889	1899
Parliament.	Wellesley	Howard	"	1888	1895
Parliament.	Gerrard	Carlton	"	1888	1898
Pearson Av.	Sorauren Av	Roncesvalles Av.	"	Parkdale	1897
Pearson Av.	Sorauren Av	Macdonell Av	"	1888	1898
Perth Av	Bloor	Royce Av.	"	1893	1898
Peter	Front	King	"	1886	1897
Peter	King	Queen	"	1890	1900
Pine Hill Rd.	Rosedale Rd	West end	Macad'm	1894	1899
Piper	York	East end	C. B.	1889	1899
Prince Arthur A	Term. of Pave't	St. George	"	1890	1900
Prospect	Rose Av.	Ontario	"	1889	1899
Queen	Don Bridge	Greenwood's line.	"	1888	1898
Rathnally Av.	Rathnally Cr.	McPherson Av	"	1890	1900
Renfrew Pl	McCaul	East end	"	1889	1899
Richmond Pl.	Richmond	South end	"	1886	1896
River	Gerrard	North end	"	1887	1897
Robinson	Bathurst	Euclid Av	"	1886	1896
Roncesvalles	Queen	Dundas	"	1890	1900
Rose Av	Howard	Winchester	Asphalt.	1892	1900
Roseberry Av.	Bathurst	End	C. B.	1894	1899
Rossin House L	York	East terminus.	Cobble.	1891	1897
Rosedale Rd	Park Rd.	North Drive	Cedar & Gravel.	Yorkville	1897
Rosedale Rd	Roxborough Av	North Drive	C. B.	1891	1897
Roxborough Av	Yonge	1,328 feet west	"	1892	1897
Roxborough Av	Yonge	2,180 feet easterly	"	1890	1900
Royce Av.	Symington Av.	C. P. R	"	1893	1898
Rush Lane	Esther	Portland	"	1890	1900
Rusholme Rd	College	Bloor	"	1890	1900
Russell	Robert	Spadina Av	"	1889	1898
Ruth	Sorauren Av	Roncesvalles Av.	"	Parkdale	1899
Sackville	Carlton	Winchester	"	1889	1898
Salisbury Av	Sackville	East terminus	"	1886	1897
Salisbury Av	Sackville	190 feet west	"	1890	1899
Saulter	Queen	Eastern Av.	"	1889	1899

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Scott	Front	Colborne	Asphalt.	1890	1900
Shannon	Ossington Av.	Dovercourt Rd	C. B.	1887	1897
Shaw	Arthur	College	"	1888	1898
Shaw	College	Bloor	"	1893	1898
Shaftesbury Av	Yonge	1,100 feet easterly	"	1890	1899
Sheppard	Adelaide	Richmond	Macad'm	1895	1899
Sherbourne	King	Queen	Asphalt.	1890	1899
Sherbourne	Queen	Bloor	"	1889	1899
Shirley	Brock	Lansdowne Av.	C. B.	1891	1898
Simcoe	Queen	Caer Howell	"	1889	1899
Simcoe	King	Queen	Asphalt.	1890	1900
Simpson	Broadview Av.	East end	C. B.	1889	1899
Smith	Broadview Av.	Logan Av.	"	1890	1900
Soho	Queen	Phœbe	"	1889	1899
Sorauren Av	Wright	Dundas	"	1890	1899
South Drive	Crescent Rd	Centre Rd	Macad'm	1894	1898
Spadina Av	College	Crescent	Cedar & Cobble.	1889	1898
Spadina Av	Queen	College	C. B.	1884	1894
Spadina Av	King	Front	"	1882	1892
Spadina Av., e.s	Cecil	Baldwin	"	1889	1899
Spadina Rd	Bloor	Bernard Av.	"	1889	1899
Spencer Av	Huxley	Mississauga	"	1890	1900
Springhurst Av	King	Jameson Av.	"	Parkdale	1897
Stafford	King	Defoe	"	1886	1896
Stafford	Defoe	Clinton	"	1887	1897
Stafford	King	Wellington	"	1890	1900
Stewart	Portland	Bathurst	"	1884	1894
St. Clarens Av.	Emily	Dundas	"	1889	1898
St. Clarens Av.	Dundas	Bloor	"	1890	1900
St. George	Bloor	Bernard Av.	Asphalt.	1889	1899
St. George	Bernard	Dupont	"	1890	1899
St. James Av.	Ontario	Parliament	"	1890	1899
St. Joseph	St. Vincent	Queen's Park	C. B.	1883	1894
St. Mary	Yonge	North	"	1888	1898
St. Mary	North	Queen's Park	"	1883	1894
Sullivan	Beverley	Spadina Av	"	1895	1900
Sully	Term. of Pave't	College	"	1891	1898
Sully	Arthur	1,465 feet north	"	1889	1899
Sumach	King	Eastern Av	"	1890	1899
Sumach	King	Gerrard	"	1888	1898
Sussex Av	Robert	Spadina Av	"	1887	1897
Sydenham (now Poullett St.)	Sydenham	South terminus.	"	1890	1896
Tecumseth	Front	Queen	"	1889	1898
Thompson	Davies Av	Munroe	"	1890	1900
Toronto	North of King.	Adelaide	Asphalt.	1891	1897
Tranby Av	Bedford Rd	157½ feet east	C. B.	1891	1896
Tranby Av	Avenue Rd	West end	"	1889	1899
Trinity	King	South terminus.	"	1884	1895
Turner	Tecumseth	West end	"	1886	1896

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Ulster	Bathurst	Major	C. B.	1889	1898
Vanauley	Queen	High	"	1886	1897
Vanauley	St. Patrick	St. Andrews	"	1887	1897
Victor Cr	Dowling Av	Jameson Av.	"	Parkdale	1897
Victor Cr	Dunn Av.	Jameson Av.	"	1893	1898
Victoria La.	Queen	Shuter	Cobble.	1890	1899
Victoria	King	Adelaide	Asphalt.	1892	1900
Virtue	Sorauren Av	East terminus	C. B.	1890	1900
Vermont	Bathurst	Manning Av	"	1891	1896
Walmer Rd.	Castle Av	Bernard Av	"	1891	1897
Walmer Rd.	Bernard Av.	Dupont	"	1892	1899
Walter	Davenport Rd.	McMurrich	"	1891	1897
Walker Av.	Yonge	West limit	"	1888	1899
Wardell	DeGrassi	North terminus.	"	1889	1898
Wascana	Sumach	186 feet easterly.	"	1891	1896
Waterloo	Gladstone Av.	Dufferin	"	1886	1896
Wellesley	Sumach	300 feet east	"	1889	1899
Wellington	Peter	Clarence Sq.	"	1886	1896
Wellington	Church	Yonge	Asphalt.	1889	1899
Wellington	Bay	York	"	1891	1899
West Lodge Av	Queen	Convent property	C. B.	1888	1898
Westmorel'd Av	Durham	Union	"	1890	1900
Westmorel'd Av	Bloor	Durham	"	1890	1900
Wilkins Av	King	North terminus.	"	1888	1899
Wilson	Queen	King	"	Parkdale	1897
William	Queen	Caer Howell	"	1887	1897
Withrow Av	Broadview Av.	1,060 feet east	"	1889	1898
Woodland	North Drive	Park Rd	Cedar & Gravel.	Yorkville	1897
Woolfrey	Broadview Av.	Bowden	C, B.	1888	1899
Woolsley	Esther	Bathurst	"	1883	1892
Wyatt Av	Sumach	River	"	1889	1898
Yonge	Davenport Rd.	Railway crossing.	"	1885	1897
York	Queen	King	"	1884	1895

TABLE No. 7.

ASPHALT.

Street.	From	To	Pavement.	Curb.	Class of Curb.	Width.	Length.	Completed.	Contractor.
			sq. yds.	lin. ft.		ft.	lin ft. in.		
Classic Av	Spadina Av	Huron	1,295	1,159	4-in. stone	22	463	June 7, 1899	Constructing and Paving Co.
Station	Simcoe	York	3,326	1,499	6-in. stone	44	640	July 5, 1899	Warren-Scharf Asphalt Co.
Queen	Bathurst	Niagara	5,356	1,159	4-in. stone	28	1,224 6	June 7, 1899	Constructing and Paving Co.
Queen	Yonge	John	10,665	1,875	4-in. stone	28	3,194	July 6, 1899	Warren-Scharf Asphalt Co.
Bedford Rd	Lowther Av	Bernard Av	3,330	2,478	4-in. stone	24	1,083 6	July 3, 1899	Constructing and Paving Co.
Carlton	Sherbourne	Parliament	4,214	2,800	4-in. stone	26	1,337	July 29, 1899	Warren-Scharf Asphalt Co.
Lane	Scott	East terminus	817	476	6-in. stone	19	379	Aug. 2, 1899	Constructing and Paving Co.
Front	Bay	York	4,312	reset.	6-in. stone	40	917	Aug. 1, 1899	" "
Markham	College	Harbord	5,386	4,046	4-in. stone	24	1,902	Sept. 2, 1899	" "
Huron	Bloor	Lowther	2,545	1,886	4-in. stone	24	871	Aug. 18, 1899	Warren-Scharf Asphalt Co.
Close	King	Queen	2,675	2,487	4-in. stone	20	1,201	Sept. 9, 1899	Constructing and Paving Co.
Marion	Lansdowne	O'Hara	1,525	1,396	4-in. stone	20	621	Oct. 4, 1899	Fruin Bambrick Paving Co.
Brunswick Av	Sussex	Bloor	2,376	1,860	4-in. stone	24	779 7	Sept. 29, 1899	" "
Prince Arthur Av	St. George	Huron	1,045	808	4-in. stone	24	392	Sept. 14, 1899	" "
Bernard Av	Bedford Rd	Avenue Rd	2,114	1,656	4-in. stone	21	852	Sept. 29, 1899	Constructing an dPaving Co.
Major	College	Bloor	9,200	7,045	4-in. stone	24	3,234	Sept. 21, 1899	Warren-Scharf Asphalt Co.
Crawford	Queen	Bridge	3,814	3,298	4-in. stone	21	1,573	Sept. 21, 1899	Constructing and Paving Co.
Churchill	Davercourt Rd	715 feet east	1,765	1,670	4-in. stone	20	715	Oct. 26, 1899	" "
Spadina Av	Knox College Cr	Bloor	8,024	5,579	4-in. stone	26	2,345	Oct. 24, 1899	Warren-Scharf Asphalt Co.
Albert	Yonge	James	1,331	446	6-in. stone	34	339	Oct. 26, 1899	Constructing and Paving Co.
Lakeview Av	Dundas	Churchill	2,354	8,023	4-in. stone	21	837	Nov. 11, 1899	" "
Gifford	Spruce	Carlton	911	1,026	4-in. stone	18	411	Oct. 21, 1899	" "
Madison Av	Bloor	Dupont	8,361	6,258	4-in. stone	24	3,041	Dec. 6, 1899	" "
Spruce	Parliament	Sumach	3,300	3,320	4-in. stone	18	1,466	Oct. 15, 1899	" "
Admiral Rd	Lowther Av	Bernard	3,084	2,836	4-in. stone	21	1,151 6	Nov. 11, 1899	Warren-Scharf Asphalt Co.
James	Queen	Albert	1,914	379 wood / 314 stone	6-in. stone	36	445	June 7, 1899	" "
Front	Jarvis	George	600	279	6-in. stone	90 & 34	295	Not completed.	Constructing and Paving Co.
Bloor	Avenue Rd	Walmer Rd	2,270	reset	6-in. stone	26	3,094	Not completed.	Warren-Scharf Asphalt Co.
		Total	97,909			Total	34,794 1		

BRICK ON CONCRETE.

Borden	College	Ulster	3,572	2,680	4-in. stone	24	1,258	June 17, 1899	John McBean.
Brookfield	Queen	Humbert	1,819	1,443	4-in. stone	24	664	June 20, 1899	John F. Connolly.
Orford Ave	Parliament	Point 243 feet east	487	517	4-in. stone	18	243	Aug. 26, 1899	City of Toronto.
Orford Ave	Clare	Point 119 feet west	146	249	4-in. stone	11	119	Aug. 26, 1899	"
Garden Ave	Roncesvalles	Sorauren	3,011	2,750	4-in. stone	20	1,355	Aug. 4, 1899	John McBean.
Pearl	York	Simcoe	1,734	1,340	4-in. stone	24	634	Nov. 29, 1899	Dom. Pav'g and Contract'g Co.
Fraser Ave	King	239 feet south	637	526	4-in. stone	24	239	Sept. 27, 1899	John Mahoney & Co.
Bellevue Pl	Bellevue Ave.	Carlyle	1,188	1,210	4-in. stone	20	483	Nov. 28, 1899	City of Toronto.
Grove Av	Fowley	Dundas	1,774	1,596	4-in. stone	21	713 6	Nov. 24, 1899	"
St. Patrick	Spadina	Denison	3,466	2,626	4-in. stone	24	1,129	Nov. 30, 1899	Dom. Pav'g and Contract'g Co.
Huron	Grange Ave	St. Patrick	964	816	4-in. stone	24	344	Aug. 24, 1899	City of Toronto.
		Total	18,798			Total	7,181 6		

BRICK ON GRAVEL.

Cameron	Queen	Cameron Pl	2,009	1,798	4-in. wood	21	821 6	May 6, 1899	Constructing and Paving Co.
Crawford	Arthur	North terminus	4,158	3,198	4-in. stone	24	1,483	June 28, 1899	Dom. Pav'g and Contract'g Co.
Cameron Pl	Cameron	Vanauley	505	450	4-in. wood	21	188 6	Nov. 9, 1899	City of Toronto.
Sorauren	Queen	Wright	7,228	5,331	4-in. wood	24	2,481 6	July 3, 1899	"
		Total	1,3900			Total	4,974 6		

BRICK ON BROKEN STONE.

Orde	Murray	University	642	816	4-in. wood	21	275	Aug. 3, 1899	City of Toronto.
Lippincott	College	Ulster	3,534	2,660	4-in. stone	24	1,190	Sept. 6, 1899	Dom. Pav'g and Contract'g Co.
Concord Ave	Bloor	180 ft. s. of Hepbourne	2,846	2,152	4-in. wood	24	1,120	Oct. 17, 1899	W. F. Grant & Co.
Denison Sq	Augusta Ave	Bellevue Ave.	600	618	4-in. wood	18	298 6	Oct. 6, 1899	J. H. McKnight.
		Total	7,622			Total	2,883 6		

GRAVEL.

Collahie	Gladstone	Beaconsfield	863	740	4-in. wood	21	366	May 31, 1899	City of Toronto.

MACADAM.

Elgin Ave	Bedford Rd	Avenue Rd	2,099	1,598	4-in. stone	24	787	Aug. 3, 1899	J. H. McKnight.
South Drive	Glen Rd	South Drive running s.	1,641	1,337	4-in. wood	22	613	Aug. 4, 1899	John F. Connolly.
Wellesley	Parliament	Sumach	4,387	3,434	4-in. wood	24	1,533	Aug. 12, 1899	Dom. Pav'g and Contract'g Co.
First Ave	Broadview	Logan	5,666	6,208	4-in. stone	21	1,994	Sept. 5, 1899	John F. Connolly.
Parliament	Queen	Gerrard	7,631	5,080	4-in. wood	26	2,556	July 15, 1899	Dom. Pav'g and Contract'g Co.
Sumach	Gerrard	Wellesley	6,600	4,924	4-in. wood	24	2,298	Aug. 11, 1899	" "
Washington Ave	Spadina	Huron	1,243	956	4-in. stone	24	466	Aug. 10, 1899	J. H. McKnight.
Division	Spadina	Huron	1,077	832	4-in. stone	24	403 7	Aug. 26, 1899	"
Spruce	Sumach	River	1,193	1,242	4-in. wood	18	536	June 23, 1899	Constructing and Paving Co.
Elm	Yonge	University	6,938	4,048	4-in. wood	30	1,905	Aug. 1, 1899	City of Toronto.
Front	George	Sherbourne	2,090	987	4-in. wood	32	674 7	Sept. 7, 1899	J. H. McKnight.
Front	Trinity	Sherbourne	8,410	3,924	4-in. wood	36	2,028	Aug. 3, 1899	Constructing and Paving Co.
Sword	Gerrard	Spruce	985	896	4-in. wood	21	414	Oct. 11, 1899	City of Toronto.
Dufferin	Dundas	Lindsay	4,116	3,108	4-in. wood	24	1,434	Dec. 5, 1899	E. J. Hartnett.
Sackville	Winchester	Wellesley	7,070	1,576	4-in. stone	24	734	Sept. 18, 1899	Dom. Pav'g and Contract'g Co
Crescent Rd	Yonge	Rosedale Rd	2,110	1,850	4-in. stone	21	865	Nov. 22, 1899	" "
Pembroke	Sluter	Wilton Ave	2,690	1,696	4-in. stone	20	795	Dec. 2, 1899	" "
Sackville	Wellesley	256 feet north	732	570	4-in. wood	24	256	Oct. 26, 1899	J. H. McKnight.
Grenville	Yonge	Surrey Pl	4,356	2,756	4-in. stone	29	1,275	Dec. 15, 1899	City of Toronto.
Victor	Broadview	Logan	5,443	4,100	4-in. wood	24	1,904	Sept. 6, 1899	Dom. Pav'g and Contract'g Co.
Gerrard	Yonge	Jarvis	5,925	2,955	4-in. wood	33	1,578	Sept. 20, 1899	City of Toronto.
		Total	81,803			Total	25,139 2		

CEDAR BLOCK ON GRAVEL.

Euclid Ave	Arthur	Robinson	3,722	2,736	4-in. stone	24	1,319 8	July 4, 1899	Dom. Pav'g and Contract'g Co.
Clinton	Mansfield Ave	College	1,700	1,234	4-in. wood	24	579 6	May 20, 1899	" "
Queen	Niagara	Gladstone Ave	14,616	7,749	4-in. wood	27	4,658	June 16, 1899	" "
Maple Grove Ave	Brock Ave	O'Hara Ave	1,054	947	4-in. wood	21	431	May 27, 1899	" "
Russell	St. George	Spadina Ave	1,737	1,349	4-in. stone	24	623	July 27, 1899	" "
Nassau	Lippincott	Bathurst	715	730	4-in. wood	21	263	July 6, 1899	" "
Sackville	Gerrard	Carlton	2,259	1,754	4-in. wood	24	827	Sept. 18, 1899	" "
Adelaide	Bay	York	3,981		None	42	843	July 25, 1899	" "
Oxford	Angusta Ave	Lippincott	2,443	1,830	4-in. wood	24	843	Not completed.	" "
Beatty	King	Queen	3,186	2,449	4-in. wood	24	1,181 6	Sept. 6, 1899	" "
Rolyat	Dundas	Grove Av	1,562	1,259	4-in. wood	24	562 6	Sept. 11, 1899	" "
Lorne	Front	Esplanade	1,696	884	4-in. wood	36	423	Sept. 15, 1899	" "
West Lodge Ave	Marion	1,145 ft. 10 in. north	3,102	2,416	4-in. wood	24	1,145 10	Sept. 23, 1899	" "
Carlyle	St. Patrick	376 ft. north	935	895	4-in. wood	20	376	Dec. 6, 1899	" "
Florence	Dufferin	Brock Ave	2,766	2,047	4-in. wood	24	1,011	Dec. 6, 1899	" "
Broadway Pl	Spadina Ave.	159 ft. 3 in. west	318	335	4-in. wood	18	159 3	Nov. 15, 1899	City of Toronto.
Spadina Ave	Queen	Adelaide	4,740	3,316	4-in. wood	48	759	Dec. 28, 1899	W. F. Grant & Co.
Sully Cr	Sully	Shaw	1,533	1,174	4-in. wood	24	575	Oct. 12, 1899	Dom. Pav'g and Contract'g Co.
		Total	52,065			Total	16,572		

CEDAR BLOCK RELAID ON CONCRETE.

Queen											
Maple Grove Ave	Brock Ave	O'Hara Ave	1,054	947	4 in. wood	21	431	May 27, 1899	"	"
Russell	St. George	Spadina Ave	1,737	1,349	4-in. stone	24	623	July 27, 1899	"	"
Nassau	Lippincott	Bathurst	715	730	4-in. wood	21	263	July 6, 1899	"	"
Sackville	Gerrard	Carlton	2,259	1,754	4-in. wood	24	827	Sept. 18, 1899	"	"
Adelaide	Bay	York	3,981		None	42	843	July 25, 1899	"	"
Oxford	Augusta Ave	Lippincott	2,443	1,836	4-in. wood	24	843	Not completed	"	"
Beatty	King	Queen	3,186	2,449	4-in. wood	24	1,181 6	Sept. 6, 1899	"	"
Rolyat	Dundas	Grove Av	1,562	1,259	4-in. wood	24	562 6	Sept. 11, 1899	"	"
Lorne	Front	Esplanade	1,696	884	4-in. wood	36	423 9	Sept. 15, 1899	"	"
West Lodge Ave	Marion	1,145 ft. 10 in. north	3,102	2,416	4-in. wood	24	1,145 10	Sept. 23, 1899	"	"
Carlyle	St. Patrick	376 ft. north	935	895	4-in. wood	20	376	Dec. 6, 1899	"	"
Florence	Dufferin	Brock Ave	2,766	2,047	4-in. wood	24	1,011	Dec. 6, 1899	"	"
Broadway Pl	Spadina Ave.	159 ft. 3 in. west	318	335	4-in. wood	18	159 3	Nov. 15, 1899	City of Toronto.	
Spadina Ave	Queen	Adelaide	4,740	3,316	4-in. wood	48	759	Dec. 26, 1899	W. F. Grant & Co.	
Sully Cr	Sully	Shaw	1,533	1,174	4-in. wood	24	575	Oct. 12, 1899	Dom. Pav'g and Contract'g Co.	
		Total	52,065			Total	16,572			

CEDAR BLOCK RELAID ON CONCRETE.

Bay	Front	Esplanade	2,000		None	42	421	Nov. 3, 1899	Dom. Pav'g and Contract'g Co.

TAMARAC BLOCK ON CONCRETE.

Scott	Front	Esplanade	2,058	1,484	None	55	351	May 15, 1899	Dom. Pav'g and Contract'g Co.

RECONSTRUCTION OF TRACK ALLOWANCE WITH BRICK AND SCORIA.

King	Sherbourne	Simcoe	8,182			16 6	4,463	July 25, 1899	City of Toronto.
Queen	Niagara	Gladstone	6,640			12 10	4,658	May 3, 1899	Dom. Pav'g and Contract'g Co.
Yonge	Grenville	Bloor	3,170			9 4	3,057	May 30, 1899	W. F. Grant & Co.
King	Sherbourne	River	5,457			12 10	3,828	June 26, 1899	Dom. Pav'g and Contract'g Co.
Yonge	Davenport Rd	C. P. R. tracks	3,370			12 10	3,012	July 19, 1899	J. H. McKnight.
		Total	26,819			Total	19,018		

CONCRETE SIDEWALKS.

Street.	From	To	Side.	Class of Curb.	Width.	Length.	Completed.	Contractor.
					ft. in.	ft. in.		
Front	Church	Scott	South	None	12	565 3	May 20, 1899	A. Gardiner & Co.
Orford Ave	Clara	119 ft. west	"	"	5	119	Aug. 25, 1899	James Nuise.
Orford Ave	Parliament	243 ft. east	Both	"	5	447 4	Aug. 25, 1899	"
Adelaide	Yonge	W. s. Freehold Loan Big	North	"	10 6	198	April 28, 1899	A. Gardiner & Co.
Homewood Ave	Carlton	Wellesley Cr	Both	4-in. stone	5	2,521 7	July 6, 1899	"
Wellesley Cr	Sherbourne	E. l't Thos. Long's prop'y	South	None	6	650	Nov. 22, 1899	"
Bay	50 ft. north of Melinda	54 ft. s. of Melinda	East	"	11	119 2	April 20, 1899	"
Yonge	Yorkville Ave	Davenport Rd	West	"	12	335	June 6, 1899	The Excelsior Paving Co.
Sussex Ave	St. George	Huron	North	"	6	407	May 15, 1899	"
Bathurst	St. Patrick	Roseberry Ave	East	"	6	492 9	June 10, 1899	A. Gardner & Co.
Madison Ave	Bloor	Bernard Ave	Both	"	6	4,145 6	July 27, 1899	"
Queen	Tecumseth	A pt. 100 ft. w. of Niagara	South	"	12	999	July 29, 1899	"
Church	King	Front	East	Reset	12	380 7	July 27, 1899	"
Huron	Bloor	Prince Arthur Ave	"	None	6	420	July 3, 1899	City of Toronto.
St. George	College	Hoskin Ave	"	"	6	1,746 6	Aug. 10, 1899	A. Gardner & Co.
Prince Arthur Ave	Avenue Rd	Bedford Rd	North	"	6	845 4	Aug. 15, 1899	"
Adelaide	Yonge	Bay	South	6-in. concrete	12	377 10	Aug. 21, 1899	"
Queen	Gwynne Av	A pt. 43 ft. 6 in. e. O'Hara	North	4-in. stone	12	983	Oct. 19, 1899	"
Front	100 ft. west of York	52 ft. e. of Simcoe	South	Reset	13	331 6	Aug. 17, 1899	W. R. Payne.
St. George	Lowther Ave	200 ft. north	East	None	6	221 6	Sept. 7, 1899	"
Queen	East limit of No. 674	W. limit of No. 684	North	"	12	119 6	Sept. 21, 1899	"
Queen	Yonge	Sherbourne	South	"	12	1,843	Oct. 7, 1899	A. Gardner & Co.
James	Queen	131 ft. 8 in. north	East	"	14	130 9	Sept. 29, 1899	W. R. Payne.
Wilcox	Huron	Spadina Ave	Both	"	6	1,067	Oct. 30, 1899	A. Gardner & Co.
Wilcox	Huron	St. George	South	"	6	429 2	Oct. 30, 1899	"
Bay	144 ft. 6 in. n. of King	Queen	West	"	12 6	807 6	Nov. 3, 1899	"
Queen	W. limit of R. Simpson's	A pt. 142 ft. west	South	"	12	141 2	Nov. 16, 1899	"
Avenue Road	Bloor	Davenport Rd	West	"	6	1,600	Not completed	W. R. Payne.
Bay	King	Wellington	"	"	12	276 10	Not completed	A. Gardner & Co.
Bleeker	Wellesley	Howard	East	"	6	1,455 4	Nov. 6, 1899	City of Toronto.
Adelaide	Bay	York	South	6-in. stone	12	825 10	Nov. 25, 1899	A. Gardner & Co.
Classic Ave	Huron	Spadina Ave	Both	None	4	889 10	Oct. 4, 1899	City of Toronto.
Carlton	Bleeker	Ontario	North	"	6	414 6	Oct. 23, 1899	"
Jarvis	Fred. Victor Mission	King	East	6-in. stone	12	919 8	Sept. 14, 1899	A. Gardner & Co.
Queen	Bay	York	South	None	12	846 7	Nov. 14, 1899	"
Walmer Rd	Bloor	Lowther Ave	West	"	6	784 6	Oct. 3, 1899	City of Toronto.
Sherbourne	Wilton Ave	Gerrard	East	"	6	608 9	June 3, 1899	A. Gardner & Co.
Dalhousie	Queen	141 ft. 6 in. north	"	4-in. concrete	4	141 6		Private.
Huntley	Linden	Isabella	"	None	5	382 5		"
Rose Ave	Wellesley	122 ft. north	West	"	5	137 6		"
Albert	In front of Eaton's		North	6-in. stone	16	103		"
Prince Arthur Ave	St. George	195 ft. west	"	4-in. stone	6	216 8		"
St. George	Prince Arthur Ave	172 ft. north	West	None	6	185 7		"
York	Wellington	91 ft. 2 in. north	East	"	13 6	103 11		"
Wellesley	Rose Ave	98 ft. west	North	"	5	56		"
Wellington	Dorset	36 ft. 3 in. west	"	"	6	35 1		"
Temperance	Opp. Methodist Book	Room	"	"	10	59		"
Toronto	Opp. Gas Office		East	"	10	61		"
Gerrard	Ontario	Seaton	North	"	6	232 8		"
Phœbe	Opp. Weston's Bakery		"	4-in. concrete	4	157 3		"
King	Opp. Massey-Harris Co.		South	None	6	60		"
Massey	Opp. Massey-Harris Co.		West	"	11 5	70		"
South Drive	East of Sherbourne	Scarth Rd	North	"	5	470 9		"
Queen's Park	St. Joseph	143 ft. north	East	"	6	163 6		"
Queen's Park	St. Joseph	181 ft. south	"	"	6	213		"
Queen's Park	St. Albans	131 ft. 9 in. north	"	"	6	159		"
Dovercourt Rd	Opp. Nos. 767 and 769		West	"	12	32		"
Wellesley Pl	Opp. Mr. Simpson's ho	use	"	"	4	64		"
Duke	Opp. Christie Brown's	factory	South	"	12	119 6		"
St. Albans	Queen's Park	A pt. 262 ft. 6 in. east	North	"	6	267 6		"
Denison Ave	Opp. Lawrence's Bakery		West	"	16	72 2		"
King	Opp. John Kay & Co.		North	"	12	53 6		"
Portland	Queen	99 ft. south	East	"	6	99		"
Wellington	York	52 ft. east	North	"	12	52		"
Maplewood Pl	Front		Both	Wood	3 6	456		"

BRICK SIDEWALKS.

Richmond	Yonge	Victoria	South	None	12	267 6	April 22, 1899	Constructing and Paving Co.
College	Huron	Spadina Ave	North	"	6	417 3	Aug. 31, 1899	J. H. McKnight.
Bay	Front	Esplanade	East	"	12	367	Oct. 4, 1899	"
Wellington	98 ft. 10 in. east of York	164 ft. 4 in. w. of Bay	South	"	12	491 5	Not completed	"
Crescent Rd	Yonge	Rosedale Rd	North	"	6	865		Private.
St. Patrick	Esther	1st lane west	South	"	6 & 18	124 4		"

BROKEN STONE ROADWAYS.

Over five miles of macadam roadways were constructed during the past year, which is nearly as much as the total for the nine preceding years, as may be seen by reference to Table No. 2.

This large increase in macadam roadways has caused a corresponding scarcity in stone, also increasing its price. Formerly all the stone required for this purpose, could be purchased from the owners of the small schooners, who gather stone from the lake, but this year a great deal of field granite was brought in by rail, which requires more handling than the lake stone, and is generally inferior to it in quality. Tables 7 and 8 show the streets paved with macadam.

CEMENT, CONCRETE, AND BRICK SIDEWALKS.

The construction of sidewalks of a permanent character has greatly increased, 5.47 miles of concrete, and 0.29 miles of brick having been laid this year. There are two reasons for this sudden increase, which may be noticed by referring to Table No. 2:

First: The City Council, upon the recommendation of the City Engineer, has prohibited the laying of wooden sidewalks on a large area in the better part of the City, and, as the existing wooden sidewalks in this locality wear out, they are replaced by either concrete or brick walks.

Second: Concrete and brick walks are now so cheap, that by extending the payments over a period of ten years, the annual cost to the ratepayers is no more than for a wooden walk on which the payments extend over three years. See Table No. 7 for details of the permanent sidewalks laid during the year.

DAY LABOR WORKS.

The City Engineer is required to tender on all works, and when his tender is the lowest, the work is ordered to be done by day labor, under the supervision of the Department.

Twenty-six pavement works were ordered to be done in this way, twenty of which have been completed and six carried over to be completed in 1900.

Table No. 9 is a list of the day labor works which have been completed, and shows the amount of the City's tender, the next lowest tender, and the actual cost of the work. It will be noticed by refer-

ring to the above mentioned table, that the cost of the cement concrete walks have exceeded the amounts of the tenders, but our tenders were far less than the walks could be laid, as it was necessary for some of them to be laid by day labor, in order to expedite the work, there being so few contractors, and so many walks that the contractors could not possibly complete what they had on hand, before the winter season set in. Even as it was they were obliged to carry several of their contracts over to the next year without starting their construction.

The Scoria Block pavement on the King Street track allowance, between Sherbourne Street and Simcoe Street, which is nearly a mile long, was completed within seven weeks of the commencement, and caused very little inconvenience to the public, as the street was kept open for travel during the whole time; the asphalt pavement on each side of the tracks being cleaned up as the work proceeded.

This section of King Street, being the busiest in the City, the paving was carried on both by night and day. The original asphalt pavement was replaced with scoria blocks $3\frac{1}{2}$ in. x 4 in. x 8 in. in size. On a portion of it only the $2\frac{1}{2}$ inch asphalt surface was removed and a surface of concrete substituted. This concrete was composed of one part of the best Portland cement to two parts of crushed granite, not exceeding $\frac{3}{4}$ inch in largest dimensions, a row of scoria blocks being placed as stretchers next to each side of each rail.

It was thought at the time by many who had had experience in paving work, that this surface, which was placed on the the old ten inch concrete foundation, would not stand; but would crack and go to pieces on account of the vibration of the rails. So far this has not proved true, for the pavement has been down eight months and appears to be as sound as ever.

Table No. 7 shows in detail all the pavements, roadways and permanent sidewalks constructed during the year.

Yours faithfully,

W. A. CLEMENT,

Assistant Engineer in charge of Pavements, Roadways, Etc.

TABLE No. 8.

Class of Pavement.	Total sq. yds. in City.	Total miles in City.	Square yards laid in 1899.	Miles laid in 1899.	Year first laid.	Maximum grade of pavement.	Guaranteed period years.	Maximum cost per sq. yd., 1899.	Minimum cost per sq. yd., 1899.	Average cost per sq. yd., 1899.
Asphalt	493,411	24.326	97,909	6.215	1888	3.03 in 100	10	$2 75 (heavy) 2 15 (light)	$2 65 (heavy) 1 66 (light)	$2 70 2 10
Brick on concrete	122,190	6.063	18,798	3.670	1893	4.80 in 100	5	1 70	1 60	1 65
Brick on broken stone	7,622	.546	7,622	.546	1899	4.80 in 100	5	1 45	1 34	1 39
Brick on gravel	31,403	2.161	13,900	.943	1896	4.80 in 100	5	1 30	1 10	1 15
Cedar block	1,775,776	96.104	56,123	3.297	1881	7.18 in 100	1	49	43	47
Gravel	71,514	5.031	863	.069	1880	3.60 in 100	1	52	52	52
*Scoria and granite	40,122	.065	11,982	1.367	1884	5.16 in 100	1	2 55	2 55	2 55
Macadam	629,192	46.000	81,803	5.013	.....	6.65 in 100	1	1 47	64	D'pth of stone varies from 8 to 16 inches.

* Street Railway track allowance not included in total mileage.

TABLE No. 9.

PAVEMENTS AND CEMENT CONCRETE SIDEWALKS CONSTRUCTED BY DAY LABOR, 1899.

Street.	From	To	Class of Work.	City Tender.	Next low'st Tender.	Actual Cost of Work.
Pavements and Roadways:				$ c.	$ c.	$ c.
Orford Avenue	Parliament	243 feet east	Brick on concrete	1,096 00	1,200 00	1,613 15
Orford Avenue	Clara	119 feet west	" "	383 00	405 00	
Bellevue Place	Bellevue Avenue	Carlyle	" "	2,789 00	2,800 00	2,574 53
Grove Avenue	Foxley	Dundas	" "	3,820 00	3,870 00	4,085 74
Huron	Grange Avenue	St. Patrick	" "	2,088 00	2,179 00	2,123 31
Cameron Place	Cameron	Vanauley	" gravel	737 00	No tenders	734 76
Sorauren Avenue	Queen	Wright	" "	10,123 00	9,018 00	8,796 72
Orde	Murray	University	" br'k'n st'ne	1,020 00	1,055 00	920 49
Collahie	Gladstone Avenue	Beaconsfield Avenue	Gravel	530 00	565 00	555 19
Elm	Yonge	University	Macadam	2,636 00	2,773 00	2,482 18
Sword	Gerrard	Spruce	"	850 00	949 00	839 68
Grenville	Yonge	Surrey Place	"	6,900 00	7,169 00	8,568 16
Gerrard	Yonge	Jarvis	"	3,356 00	3,150 00	2,628 14
*Broadway Place	Spadina Avenue	159 feet 3 inches west	Cedar blocks	299 00	199 00	316 18
				per lin. ft.	per lin. ft.	per lin. ft.
King	Sherbourne	Simcoe	Scoria	5 70	5 95	5 22
Cement Concrete Walks:						
Huron, e. s	Bloor	Prince Arthur Ave	Concrete walk	90	94	94
Bleeker, e. s	Wellesley	Howard	"	60	64	74
Classic Ave., b. s	Huron	Spadina Avenue	"	46	47	49
Carlton, n. s	Bleeker	Ontario	"	No tenders	No tenders	74
Walmer Road, w. s	Bloor	Lowther Avenue	"	66	69	74

* Contractor having made an error of $100 in his tender, refused to go on with the work and forfeited his deposit.

SEWERS AND DRAINS.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 30th, 1899.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—I beg to submit the following report of the work performed by this Department during the year ending 31st of December, 1899.

During the year the following sewers were constructed :

12-in. tile pipe	4,491	feet.
12-in. tile pipe in 3 inches of concrete	240	"
15-in. tile pipe in 3 inches of concrete	1,100	"
12-in. tile pipe (re-laid)	400	"
15-in. tile pipe (re-laid)	500	"
18-in. tile pipe (re-laid)	28	"
2-ft. x 3-ft. brick	195	"
Total	6,954	"

There are 231⅓ miles of sewers in the City.

During the year there were

74 new manholes built.
111 manholes repaired.
619 gullies built.
366 gullies repaired.
86 miles of sewers flushed and cleaned, at a cost of $34 per mile.

The following is a list of the plans made during the year :

8 contract plans.
10 day labor plans.
19 working plans.
75 miscellaneous plans.

There are at present 65 flush tanks in the City, which are inspected every week. All are in good working order.

QUEEN STREET CULVERTS.

During the year a 4-ft. brick, arch culvert has been built to take the place of three 18-in. pipes across Queen Street, at Pape Avenue, which were found crushed.

Also a 4-ft. brick, arch culvert has been built to take the place of the timber culvert across Queen Street, at Howard Avenue, which was found badly sunken and decayed.

ASYLUM SEWER CONNECTION.

A connection has been made between the 2-ft. x 3-ft. brick Asylum sewer and the King Street sewer at the corner of King and Shaw Streets, at the expense of the Provincial Government.

MUTUAL STREET SEWER.

This sewer has been built 48 years, is in bad condition and failed just above Wilton Avenue, this spring, flooding several cellars and necessitating 40 feet being taken up and re-laid.

The following is a statement of the private drains constructed during the year, to December 31st inclusive:

Month.	6-in. ft.	9-in. ft.
January	553	....
February	345	....
March	969	129
April	1,813	66
May	2,085	66
June	1,514	28
July	1,521	28
August	1,311	....
September	2,770	304
October	1,918	221
November	1,685	210
December	638	183
Total	17,122	1,235

In addition to the above, 61 drains were repaired. The attached schedules and diagrams give all the information relative to cement tests made in this Department during the year.

All the Special Engineering work, exclusive of Roadway work, was performed by the staff of this Department.

SPECIAL WORK.

TEMPORARY BRIDGES OVER THE DON RIVER.

In connection with the construction of the new bridges over the Don River at Queen Street and Eastern Avenue, two temporary pile trestle bridges were constructed. The piling was driven by contract,

CONDENSED TABLE OF CEMENT TESTS

——1899——

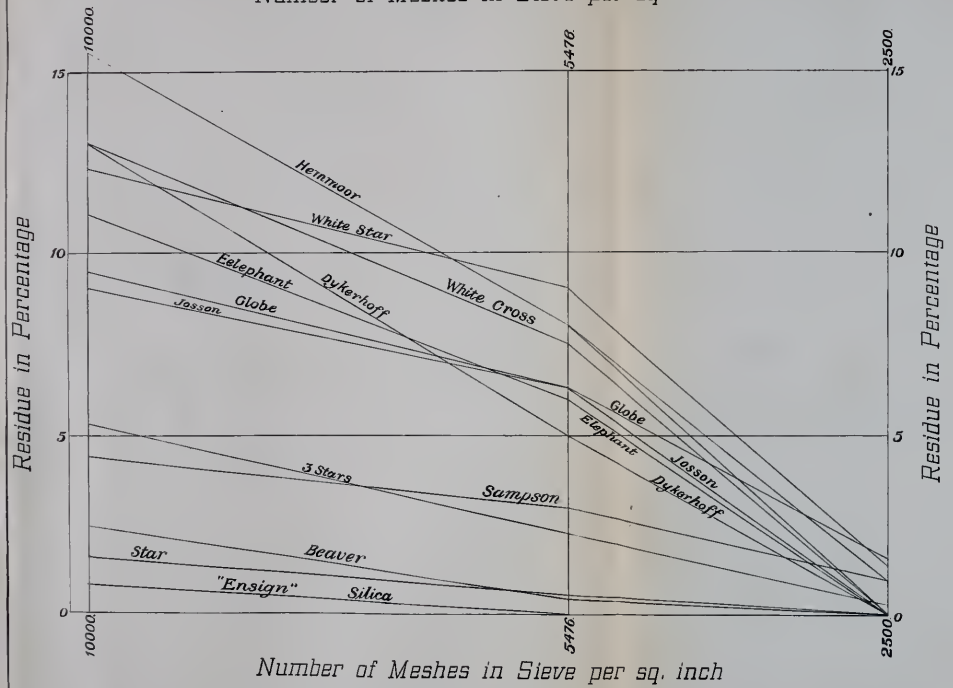
Brand of Cement	No. of Samples Tested	Average Specific Gravity	Result of Blowing Test	Residues %. Sieves Meshes Per Inch			Tensile Strength Neat					Tensile Strength 3 to 1				
				50	74	100	1 week	1 mo.	2 mos.	3 mos.	6 mos.	1 week	1 mo.	2 mos.	3 mos.	6 mos.
White Star...[Belgian]..	3	3.04	Good	1.3	9.0	12.3	231	311	359	385	...	85	152	176	232	...
Globe	1	2.94	Good	1.5	6.2	9.4	257	349	415	429	421	115	163	194	231	256
Josson	1	3.08	Good	.0	6.2	9.0	386	452	506	520	536	91	133	202	215	...
Dykerhoff	1	3.16	Good	.0	5.0	13.0	439	495	416	515	660	132	178	215	198	...
Elephant	1	3.00	Good	.0	6.0	11.0	306	320	422	381	...	89	190	215	246	...
Hemmoor	1	3.08	Good	.0	8.0	15.5	529	474	500	551	570	164	211	220	210	202
3 Stars.....[German]..	2	3.07	Good	.25	2.2	5.2	359	442	467	495	456	159	190	262	256	313
Beaver.....	4	3.07	Good	.0	.5	2.4	353	397	388	444	471	123	181	249	248	328
Ensign	8	2.98	Good	.0	.0	0.8	346	395	468	488	497	112	177	233	230	254
White Cross	5	3.05	Poor	1.0	7.4	13.0	360	443	449	520	537	126	169	231	278	321
Samson	10	3 09	Good	1.0	3.0	4.3	429	489	535	554	559	134	211	251	273	295
Star . .... [Canadian]..	41	3.07½	Good	.0	0.6	1.7	459	515	546	558	580	183	247	297	331	358

City Engineer's Office,
April, 1900.

1899

CEMENT SIFTING DIAGRAM

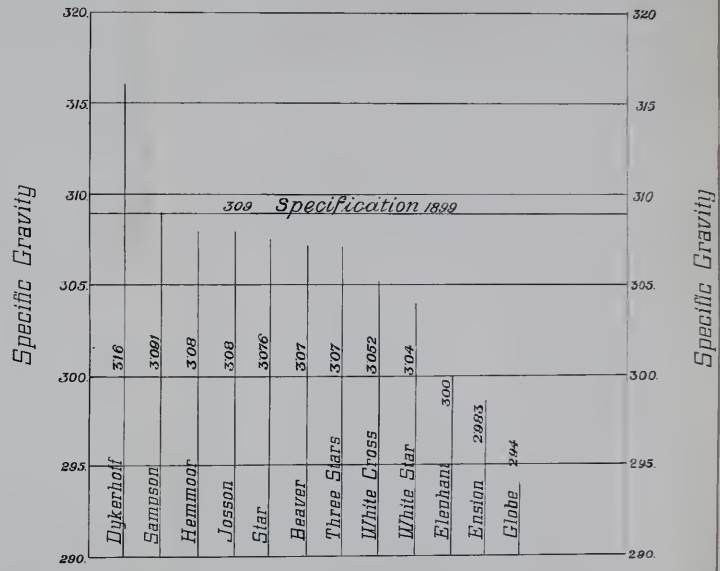
Number of Meshes in Sieve per sq. inch



NOTE

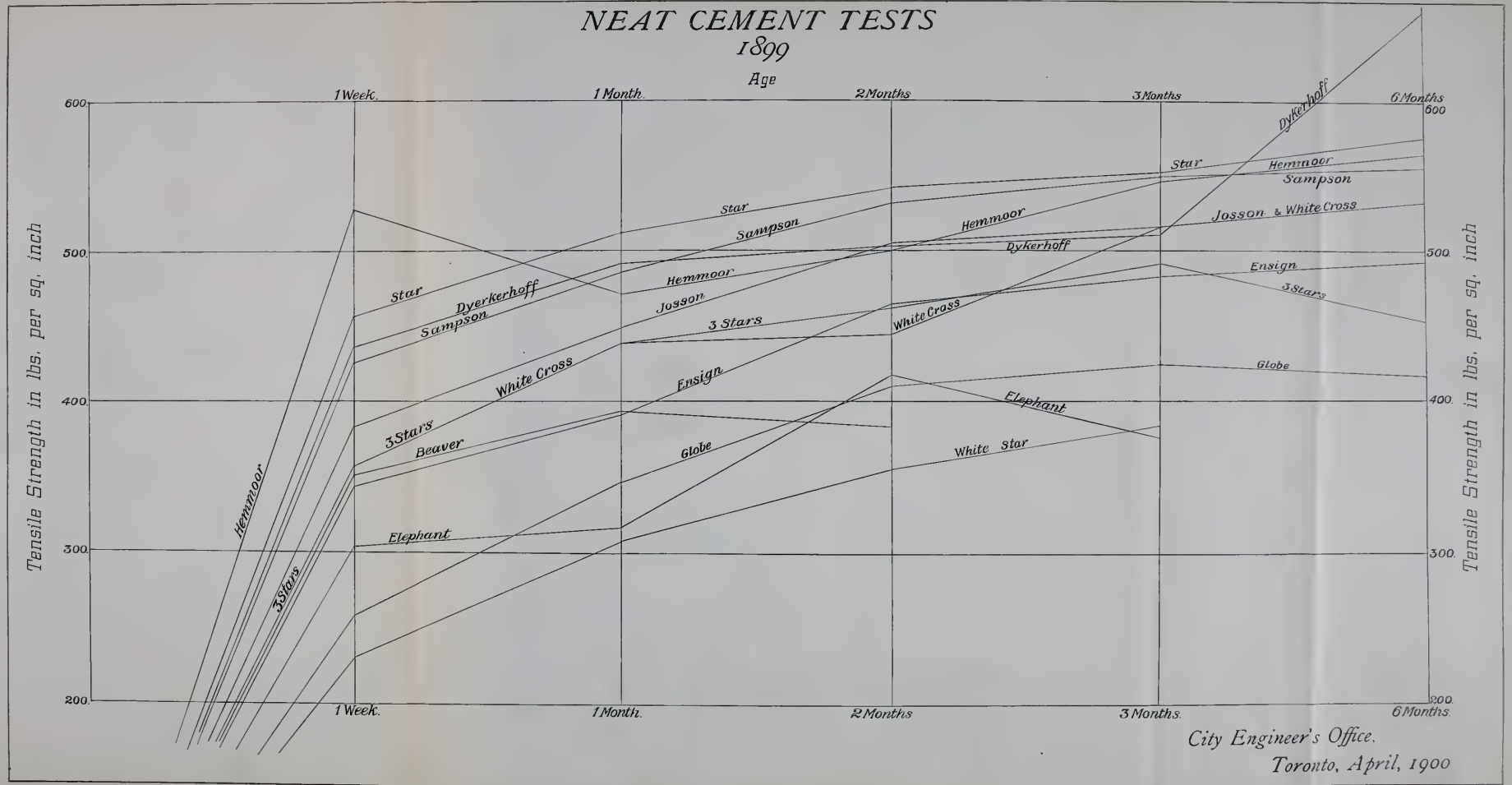
All Portland Cements except "Ensign" Silica Portland Cement

CEMENT SPECIFIC GRAVITY DIAGRAM 1899



City Engineer's Office.

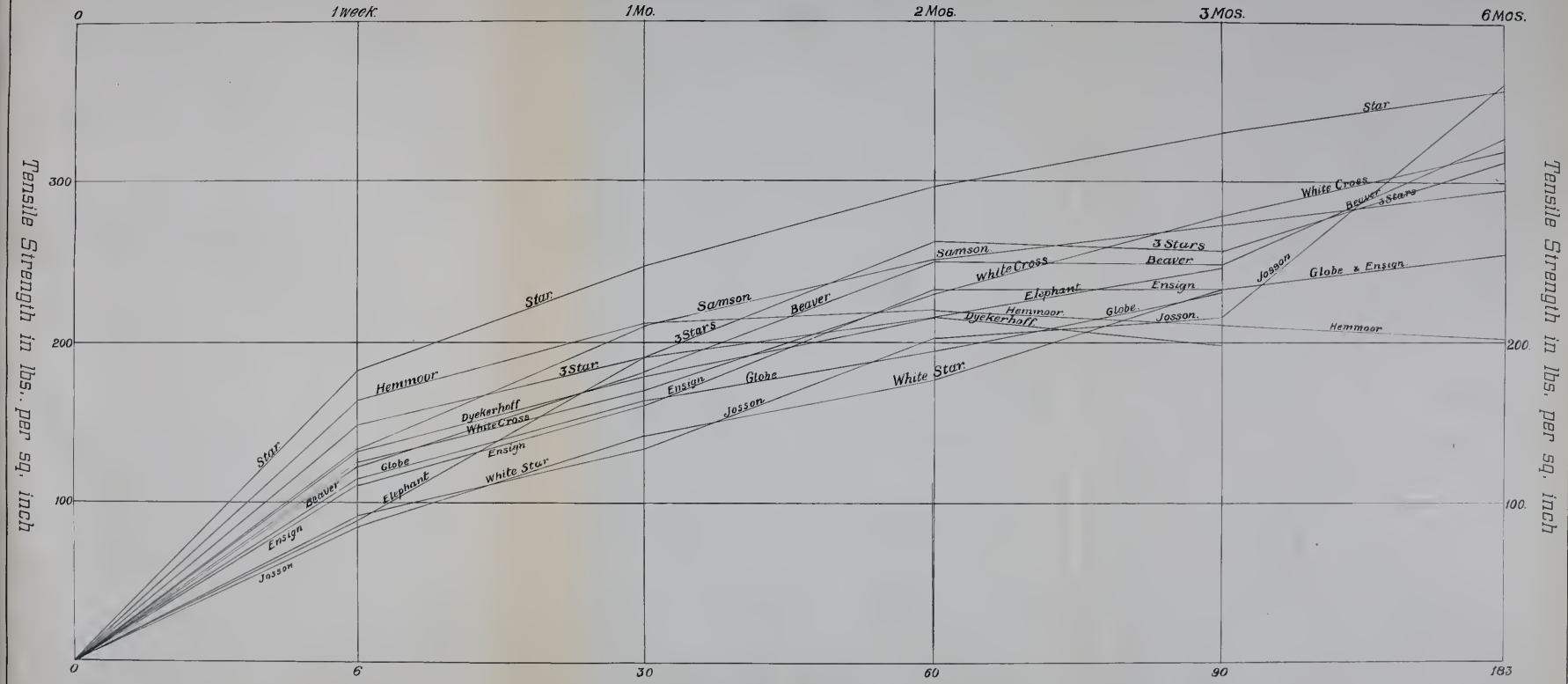
Toronto, April, 1900


NEAT CEMENT TESTS
1899
Age
1 Week.
1 Month.
2 Months
3 Months
6 Months
600
500
400
300
200
Tensile Strength in lbs. per sq. inch
Hemmoor
3 Stars
Star
Dyerkerhoff
Sampson
Star
Sampson
Hemmoor
Josson
3 Stars
White Cross
Ensign
3 Stars
Beaver
Globe
Elephant
Dykerhoff
Star
Hemmoor
Sampson
Josson & White Cross
Dykerhoff
Ensign
3 Stars
White Cross
Globe
Elephant
White Star
City Engineer's Office.
Toronto, April, 1900

CEMENT MORTAR—3 to 1

Age

1899



City Engineer's Office.

Toronto, April, 1900.

but the superstructures were built by day labor, the timber used being taken largely from the chords, etc., of the wooden Howe truss just taken down from Eastern Avenue.

The Eastern Avenue temporary bridge was made with one roadway 11 feet wide and one sidewalk 4 feet wide, or 15 feet in all.

The Queen Street temporary bridge was made wide enough to carry two street car tracks 17 feet wide and 8 feet of sidewalk, or 25 feet in all.

EASTERN AVENUE BRIDGE ABUTMENTS.

These are the first abutments built in Toronto, made entirely of concrete. They are founded on piles, are 30 feet high, 33 feet long and cost $7,446.60, exclusive of inspection; but this amount includes, however, the cost of tearing down the old wooden Howe truss. The price of concrete was $6 per cubic yard.

The iron work of this bridge is in course of erection.

HUMBER RIVER BRIDGE ABUTMENTS.

These abutments have been completed, and are also entirely of concrete founded on piles. They are 20 feet high, 35 feet long and cost $4,473.15, exclusive of inspection.

The traffic was maintained on the old wooden bridge during construction, and the iron work had not begun to be erected at the end of the year.

The price of concrete was $5.50 per cubic yard.

QUEEN STREET BRIDGE ABUTMENTS.

These abutments were practically completed at the end of the year, at a cost of about $12,000, exclusive of inspection. They are of stone ashlar, founded on concrete and piles on the west side, and on solid rock on the east side. The contractor's time having expired on November 14th, 1899, and the work not being then carried on as expeditiously as was thought necessary, the contract was taken out of his hands and completed at his expense, forces working for twenty hours per day for eight days in putting in the foundation of the west abutment.

These abutments are 54 feet long and 29 feet high. The price of masonry was $10 per cubic yard. The false work for the iron work has already been erected by the Hamilton Bridge Co., who have the contract for all the superstructure.

LEE AVENUE GRADING.

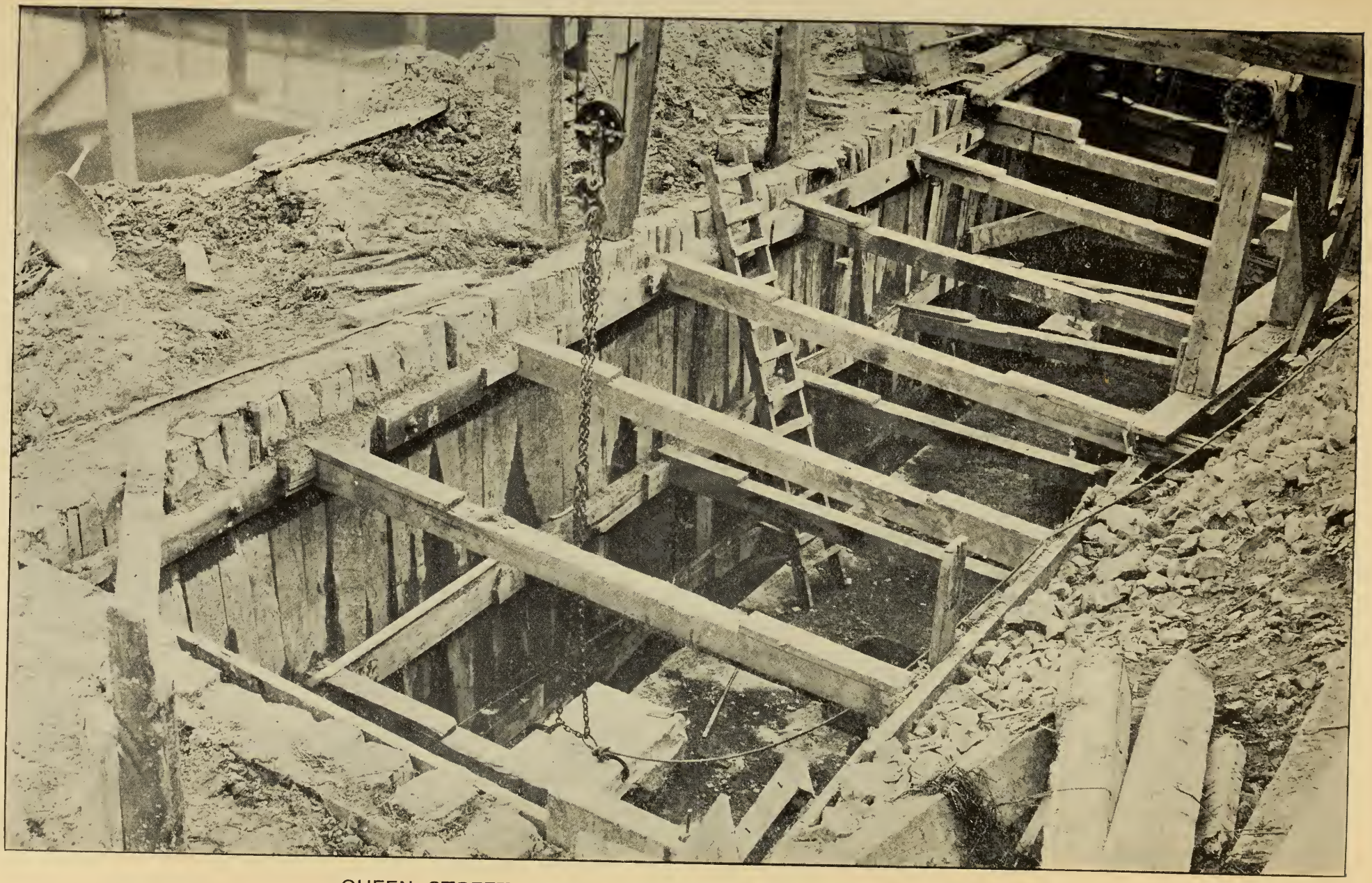
A ditch has been constructed down the east side of Lee Avenue, along with some grading necessitated by it, under the "Ditches and Water Courses Act."

ASHBRIDGE'S DITCH.

A ditch has been constructed from the northern City limits, at the Ashbridge's Estate across Queen Street and Eastern Avenue, to Ashbridge's Bay, under the "Ditches and Water Course Act."

Respectfully submitted,

CECIL B. SMITH,
Assistant Engineer.



QUEEN STREET BRIDGE OVER DON RIVER, WEST ABUTMENT
1899

QUEEN STREET BRIDGE OVER DON RIVER EAST ABUTMENT
1899

QUEEN STREET BRIDGE OVER DON RIVER, EAST ABUTMENT
1899

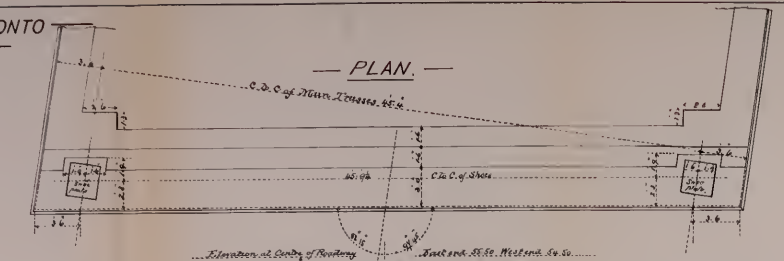
CITY OF TORONTO

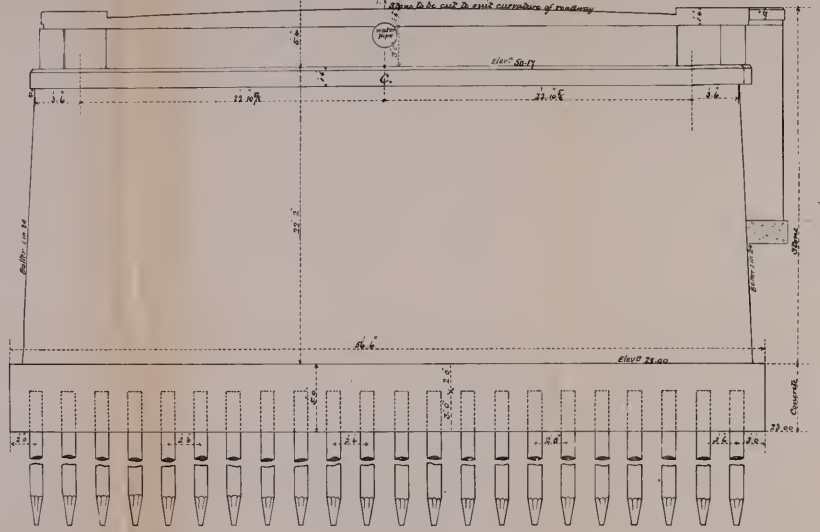
QUEEN ST. BRIDGE.

OVER RIVER DON

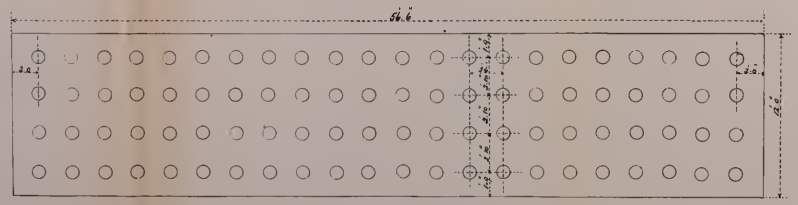
DETAILS OF ABUTMENTS.

PLAN.

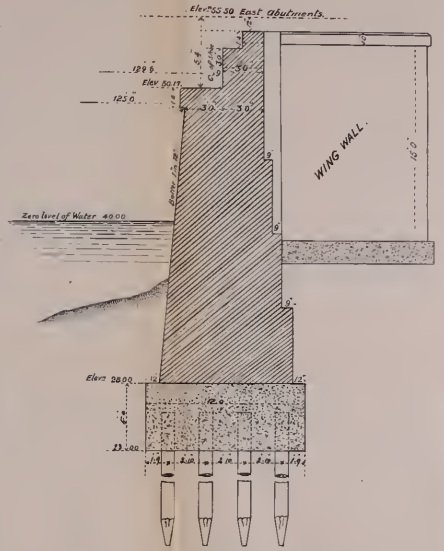




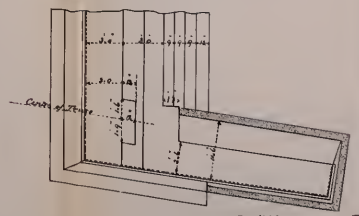
ELEVATION.



PLAN of CONCRETE BASE



TRANSVERSE SECTION AT C. OF EAST ABUTMENT THE WEST ABUTMENT IS 1. FOOT LOWER



PLAN of WING WALL

CITY ENGINEERS OFFICE
TORONTO OCT. 4th 1899
C. H. Rust
City Engineer

BRIDGES.

City Engineer's Office,
Toronto, December 30th, 1899.

C. H. Rust, Esq.,
City Engineer.

Dear Sir,—The following is a report of the Bridge work done during the past year:

Lamb's Draw Bridge.—New roller wheels were placed on this bridge to replace those broken. Considerable repairs have been made on bridge and deck. As this structure was not designed to carry the heavy traffic it now has to sustain, it requires constant attention and repairs throughout the year. If this heavy traffic continues, a new and stronger bridge will have to be erected at this point, in the near future.

Cherry Street Bridge.—Owing to the severe floods in the early part of the year, the easterly crib of this bridge, in centre of channel, was partly overturned and considerably damaged. The position taken by the damaged crib partly blocked the southern channel, so that the stone filling had to be removed and the upper part of the crib raised and floated, leaving the bottom part and two courses of timbers on the bed of the river. The water over this sunken portion is of sufficient depth for boat traffic.

Strachan Avenue Bridges.—A new 2-in. wearing surface has been placed on both these bridges, the hand-railing repaired and all the bents examined, repaired and braced where necessary. Some of the supports of the floor beams and sills will have to be renewed during the coming season.

Bin Scarth Bridge.—This bridge has been examined and repaired where necessary, but it will soon require considerable repairs, and probably entire renewal, as much of the material in the supports shows decay.

Castle Frank Bridge.—When this bridge was partially rebuilt in 1896, old but then sound lumber was used in the sills and bents.

This timber is at present much decayed, and will require renewal in the near future. Some repairs to the deck and hand-railing of the bridge were made this season.

Shaw Street Bridge.—The planking in the deck of this bridge was partly renewed, the railing repaired and some pieces of the bents removed and replaced with sound timber, where needed. If the site of this bridge is to be filled in, as proposed, the sills and bents must be thoroughly repaired next season, so that the bridge will remain firm during the process of filling. The deck must also be renewed.

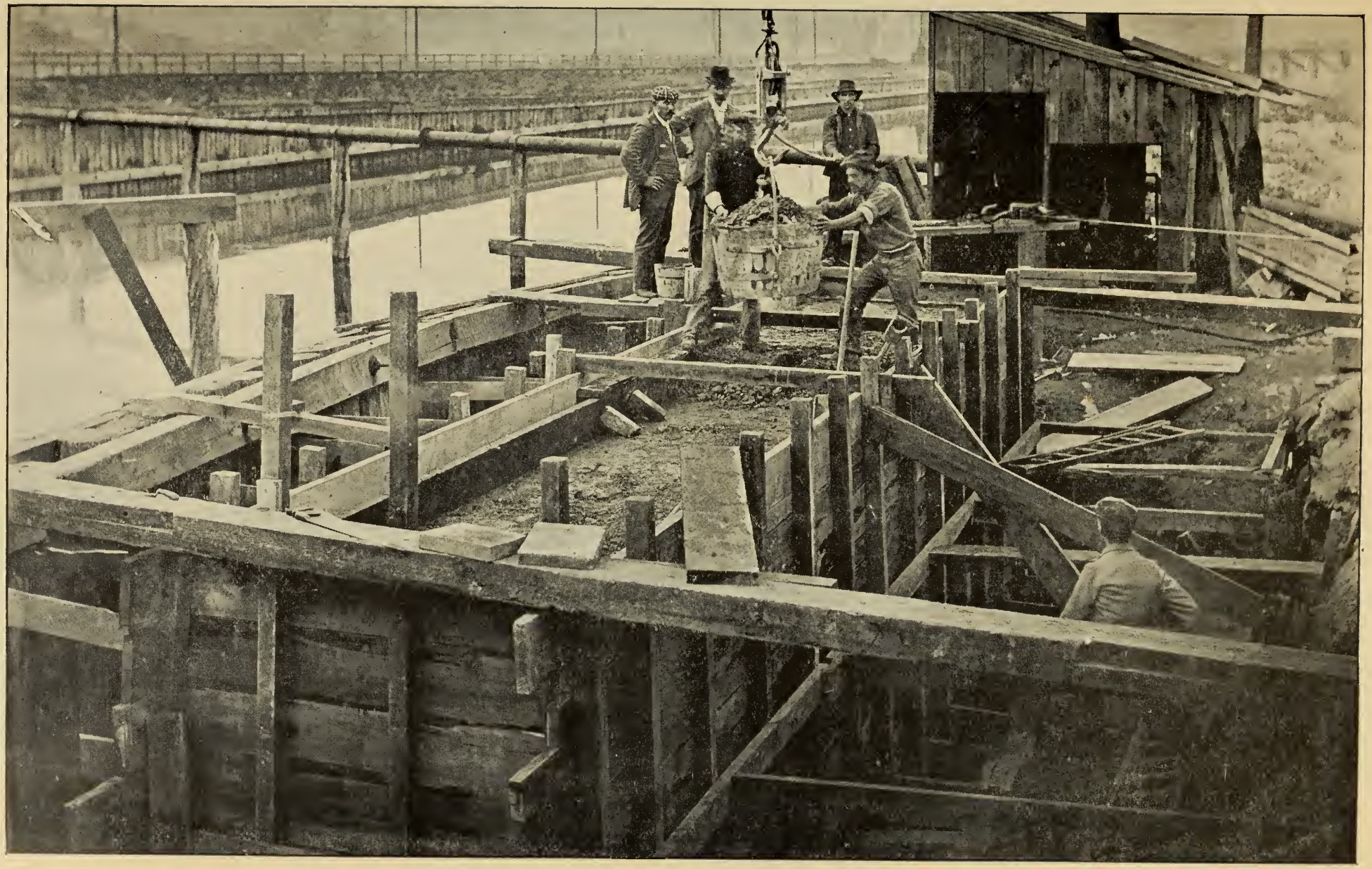
Crawford Street Bridge.—The wearing course of the deck of this bridge has been partly renewed and some general repairs made, but the bridge is now in a very poor condition, the underplanking and stringers being much decayed. This structure must either be repaired very soon, or preparations must be made to replace it by a new bridge.

Humber Bridge.—In view of the decision to erect a new steel bridge to replace the existing wooden one, piles and bents were placed in the river to support the bridge deck, independently of the trusses. During the spring freshets, these bents were washed away, and timbers in the form of a queen truss were placed under the south side of the west span. The deck of the bridge was reduced in width by placing a heavy fence in the centre, thus confining the traffic to the north side of the bridge, which was the strongest side. The deck of this bridge was much disturbed by the operations of the contractor for the masonry work on the new bridge, but all was made safe for ordinary traffic.

York Street Bridge.—The new stairway and fence placed at the south end of this bridge in 1898, was examined and painted.

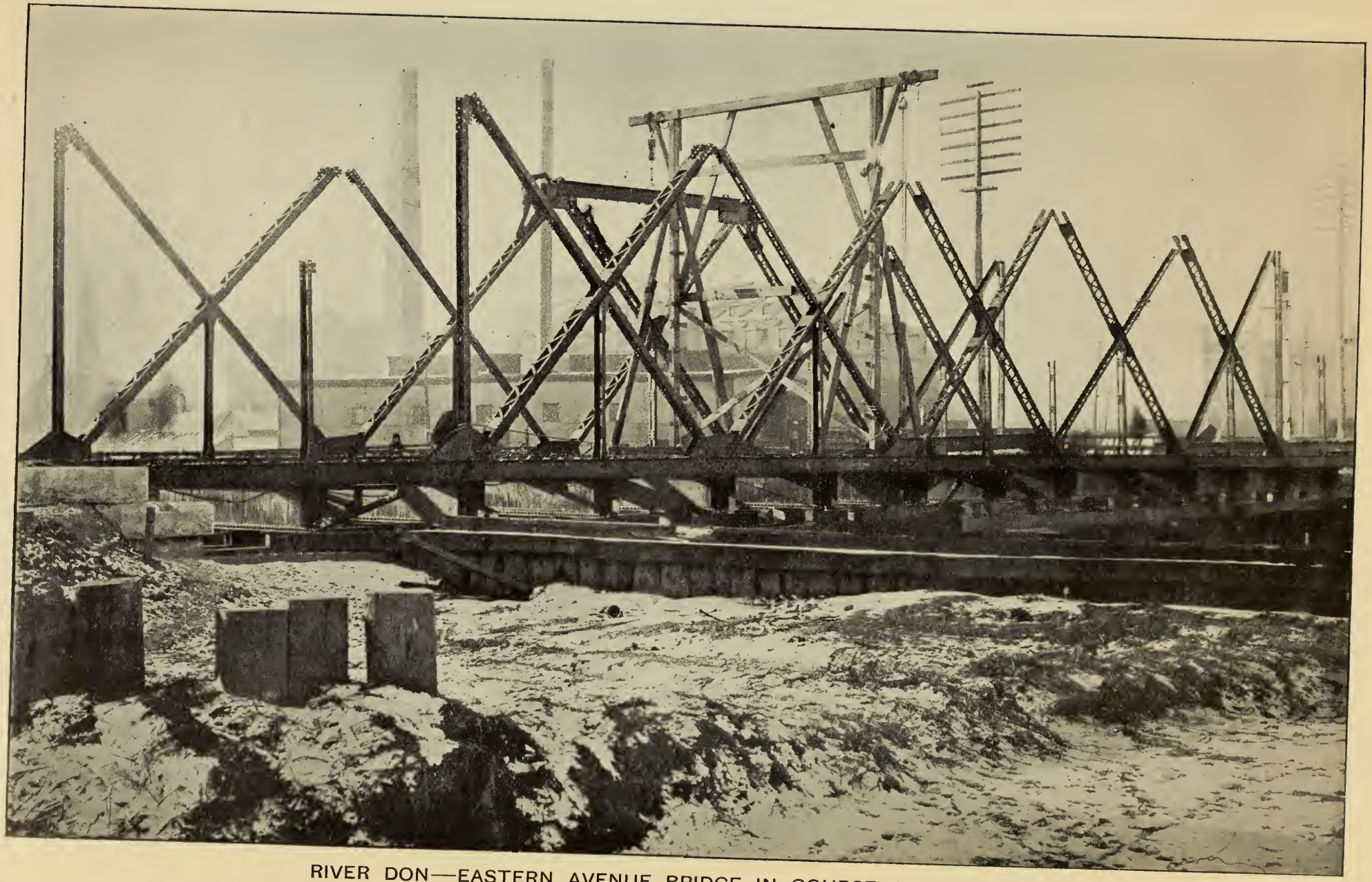
Eastern Avenue Bridge.—In view of the decision to erect a new bridge to replace the existing one, only such repairs to the deck and reinforcing of the weak places were done that were necessary to keep the bridge in a safe condition for traffic.

Culverts in Lake Shore Road.—The two Lake Shore Road culverts (one being the outlet for Grenadier Pond, and the other for the pond at the south end of High Park) were opened, new timbers or sills put on side timbers, new planking placed over all, and the roadway replaced and consolidated.

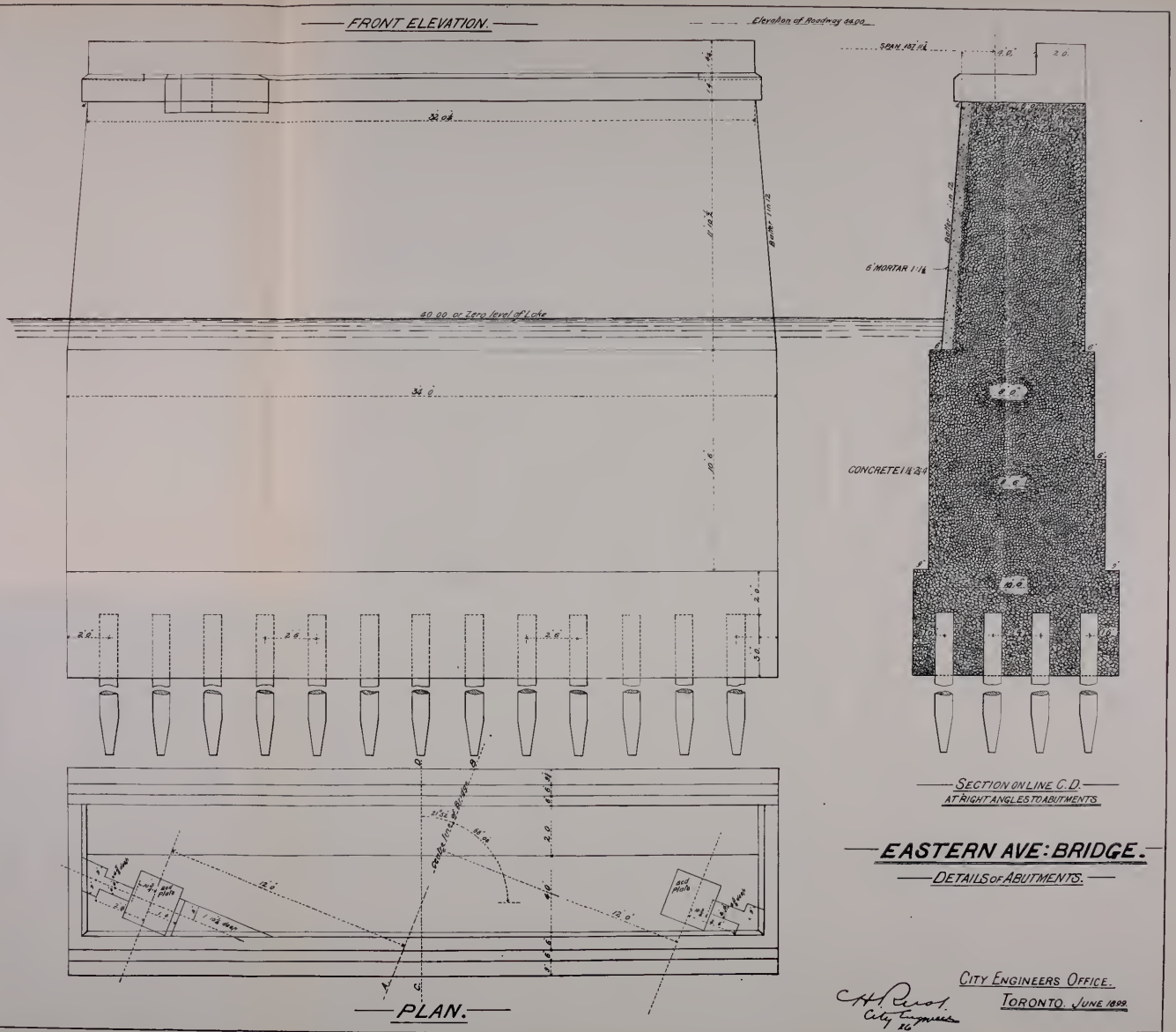


EASTERN AVENUE BRIDGE EAST ABUTMENT,
1899

EASTERN AVENUE BRIDGE, WEST ABUTMENT
1899



RIVER DON—EASTERN AVENUE BRIDGE IN COURSE OF ERECTION
1899


FRONT ELEVATION.
Elevation of Roadway 48.90
32.0'
11'-10½"
Batter 1 in 12
40.00 or Zero level of Lake
34'-0"
10'-6"
2'-0"
2'-6"
2'-6"
2'-6"
3'-0"
SPAN 187'-11½"
9'-0"
2'-0"
Batter 1 in 12
6" MORTAR 1:1½
CONCRETE 1:4½:9
9'-0"
10'-0"
PLAN.
SECTION ON LINE C.D.
AT RIGHT ANGLES TO ABUTMENTS.
EASTERN AVE: BRIDGE.
DETAILS OF ABUTMENTS.
CITY ENGINEERS OFFICE.
TORONTO. JUNE 1899.
C. H. Rust
City Engineer
E.C.
6.99

GERRARD STREET BRIDGE.—A new 2-in. plank wearing surface was laid between the tracks over the entire length of this bridge, and the supports of the end panels of hand-railings were replaced by cast iron posts, which were bolted to the masonry and hand-rail standards.

HUNTLEY STREET BRIDGE.—An entirely new deck has been laid on this bridge, with the exception of a few stringers that were found good and sound, and a system of side drainage was also put in, as the old vertical spouts were constantly filled with street sweepings.

GLEN ROAD BRIDGE.—This bridge was in a dangerous condition, the cast iron post for hand-rail, resting on timber joists only, which were much decayed. Twelve-inch I beams have been placed transversely to the bridge, so as to carry each of the hand-rail posts, and a cast iron extension piece was placed between the I beams and posts to bring the sidewalk to the proper level. An entirely new deck, both stringers and planking, has been put on this bridge, and a system of side drainage introduced, similar to that put in the Huntley Street bridge. This structure is now in first-class condition, and although the trestle bents are on the light side of strength, yet the bridge is better now than when first built.

DUNDAS STREET BRIDGE.—As the devil strip on this bridge was of the old width, viz., three feet between the rails, in order to lessen the possibility of accidents and to comply with the request of the Toronto Railway Co., it was widened. The planking on this bridge was in very good condition and did not need renewing, so it was sawn through on the north side of the north track and on the south side of the south track, next the 12-in. stringer, the planking moved from the devil strip, the track forced over until the sawn planks were hard against the rails, and the planking renailed to the stringers. This made the devil strip 3 feet 8 inches between the rails, or 2 inches wider than required. The under planking in the devil strip, having been laid diagonally, was long enough to cut and lay at right angles to the rails, so that very little new planking was required. The roadway section between the bridges and the approaches thereto, had to be taken up and reblocked.

RIVERDALE PARK FOOT BRIDGE.—This bridge is in fairly good condition, although it shows signs of decay in a few places. Slight repairs will suffice to keep it in good repair for some time to come.

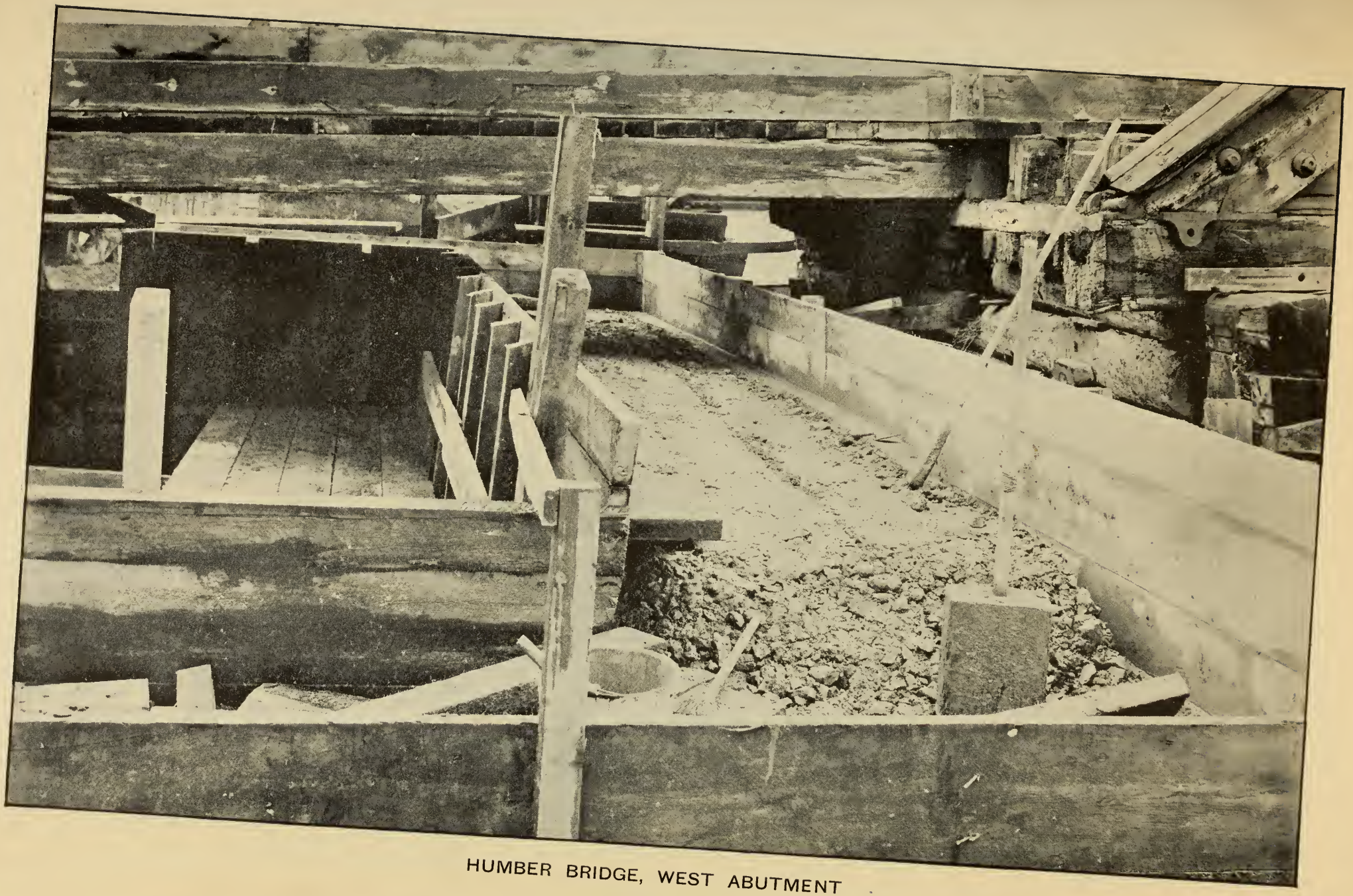
WINCHESTER STREET BRIDGE.—This bridge shows some signs of decay, but is still in fairly good condition. A few renewals to deck planks and a little paint, will keep it in good order.

DANFORTH AVENUE BRIDGE.—This bridge must be entirely renewed, as the timbers are very much decayed.

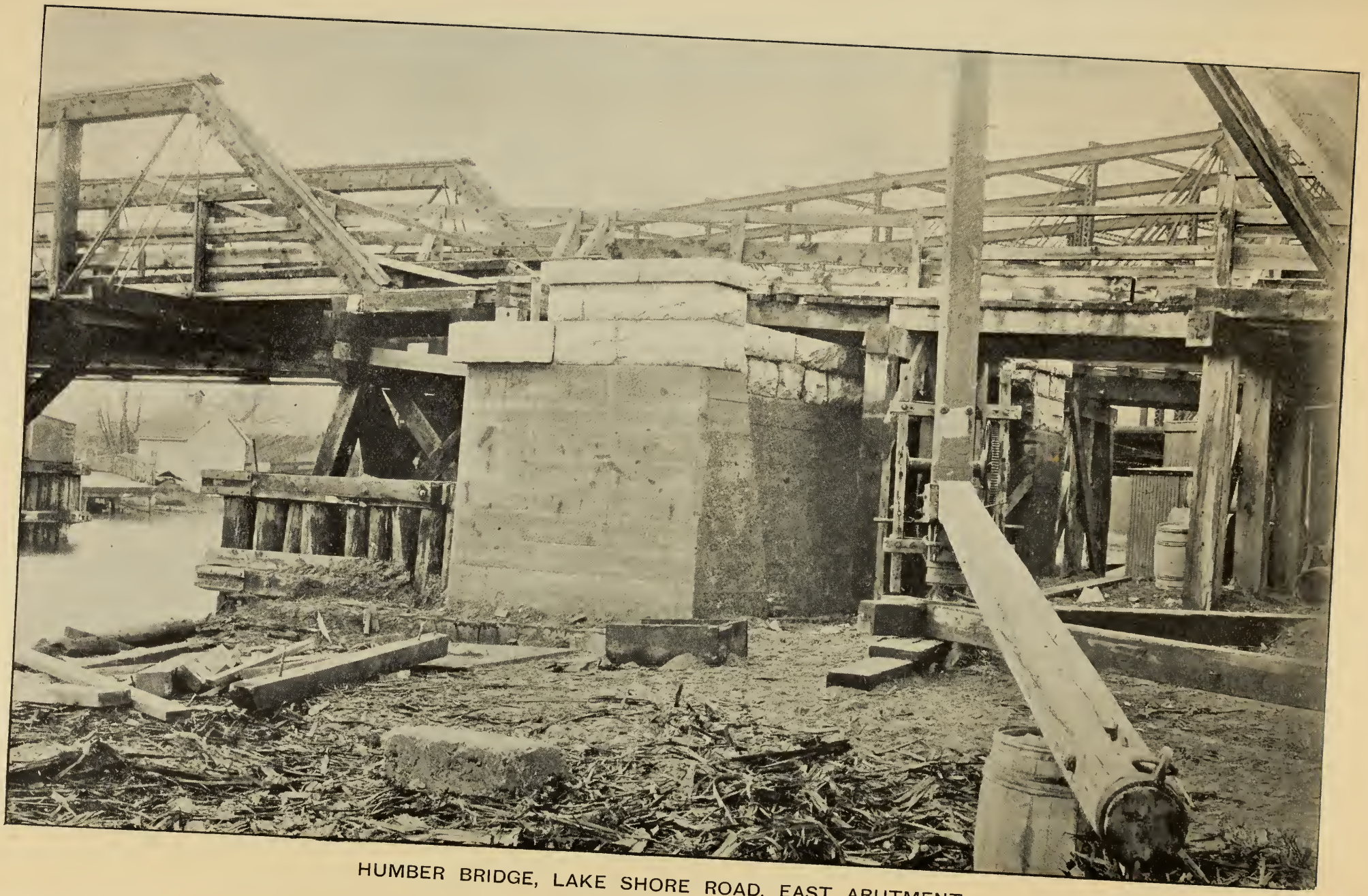
SHERBOURNE STREET BRIDGE.—This bridge is in very good condition, but owing to a slight inequality in the level of the deck, a few extra drain pipes will have to be laid in the coming spring.

Respectfully submitted,

JOHN WILLIAMS,
Assistant Engineer.

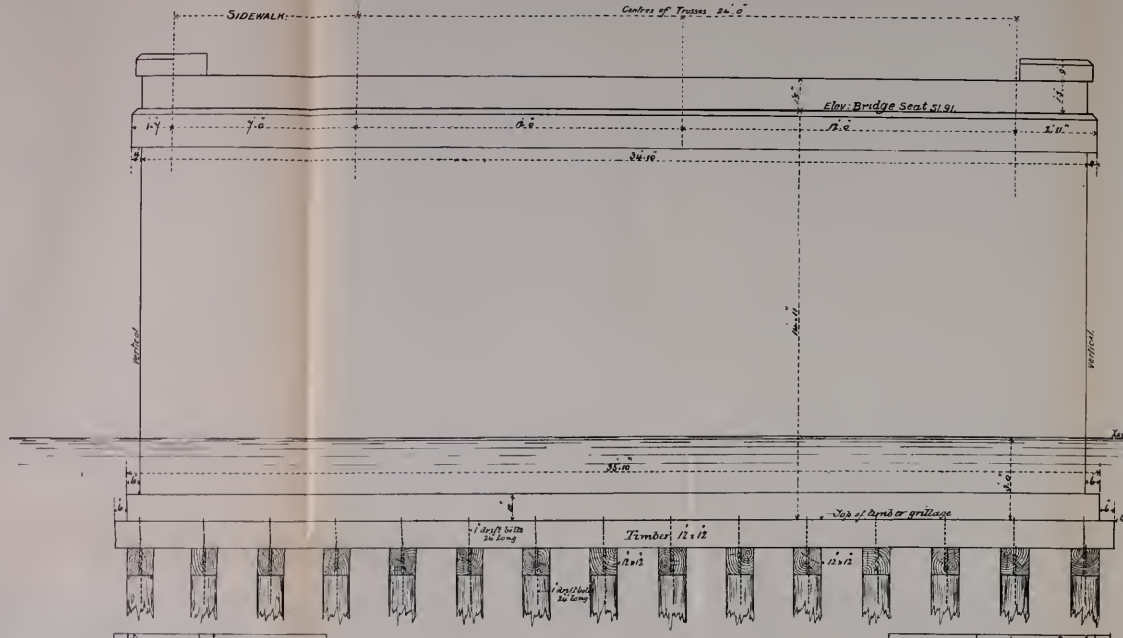


HUMBER BRIDGE, WEST ABUTMENT
1899

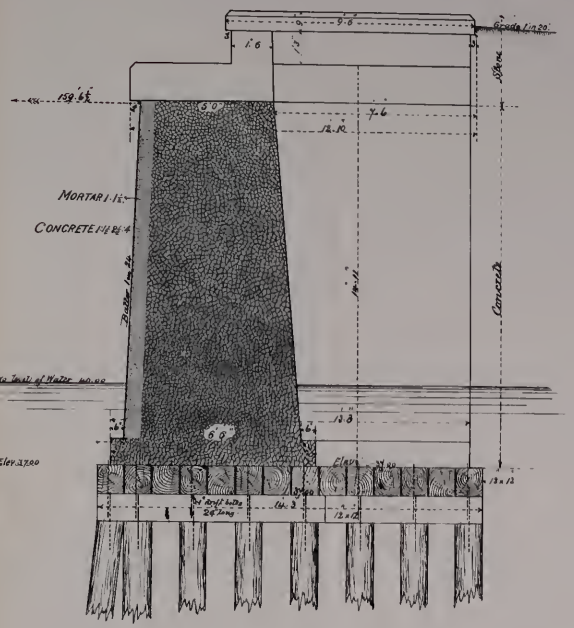


HUMBER BRIDGE, LAKE SHORE ROAD, EAST ABUTMENT
1899

ELEVATION OF ABUTMENT.



SECTION ON LINE C.D.



HUMBER RIVER BRIDGE.

DETAILS OF ABUTMENTS.

NOTE: THIS DRAWING SHEWS THE WEST ABUTMENT. THE WING WALLS IN THE EAST ABUTMENT ARE 2'0" SHORTER VI3 11'3" OVER FOOTINGS.

CITY ENGINEER'S OFFICE
TORONTO SEP. 28th 1899.

C. H. Rust
City Engineer

REPORT OF STREET COMMISSIONER.

CITY ENGINEER'S DEPT.,
Toronto, December 30th, 1899.

C. H. RUST, ESQ.,
City Engineer.

I beg to submit a report of the works carried out under my supervision during the past year:

ROADWAYS.

The roadways throughout the City, composed as they are of cedar block, macadam, stone, etc., (other than asphalt and brick) the lifetime of which as Local Improvements have not expired, have been kept in the best of condition possible. The funds appropriated for the maintenance of these roads were found inadequate. Extensive repairs have been made to macadam roadways that have been constructed in recent years as Local Improvements, as follows:

Street.	From	To	No. of square yards.	Cost.
Jarvis	Queen	King	2,702	$354 38
Richmond	York	Bay	1,794	178 35
Temperance	Bay	Yonge	960	104 79
John	King	Front		24 81
Sheppard				15 60

The funds appropriated under the heading of "General Road Repairs," have been expended on the grading of unimproved roadways, many of which are not drained. These are largely in localities that would not stand an expenditure for a Local Improvement. Many of these roadways have been coated with ashes collected in the neighborhood. While the roadway will not stand heavy traffic, yet it meets with the requirements of the locality.

LANGLEY AVENUE ROADWAY.

There was constructed by day labor, under this Department, a macadam roadway on Langley Avenue, from Broadview Avenue to Logan Avenue. Work was commenced November 1st 1898, and completed May 9th, 1899. Length 1,959 feet; width, 24 feet; number of superficial yards 5,224; cost $2,707.89.

QUEEN STREET AVENUE REPAIRS.

Repairs to the macadam roadway on Queen Street Avenue, both north and south of College Street, were made to the extent of 1,460 yards of re-surfacing, at a cost of $1,498.62.

GLEN ROAD ROADWAY.

SOUTH DRIVE TO THE BRIDGE.

A cedar log roadway, with a 3-in. top dressing of broken stone, was constructed on both sides of the railway track on Glen Road, from South Drive to the Bridge. This was necessitated by the construction of the Street Railway Line, and was charged to the track allowance account.

LEVELLING NORTH BANK OF KEATING'S CHANNEL

Pursuant to order of Board of Control, $600.00 was authorized to be spent "for the purpose of providing work for unemployed men in levelling down the north bank of McNamee's Cut." This was done for a length of 875 feet, and an average width of 11 feet.

CROSSINGS.

The funds at the disposal of the Department for crossings, have been expended to the best advantage. Pursuant to order of the Committee on Works, 13 scoria crossings were constructed on Beverley Street. Granite sett crossings were also constructed across Bathurst Street, at Wellington; across Esplanade, at Yonge Street, and across Scott Street, at Esplanade. Brick crossings were constructed on the west side of Homewood Avenue, at Montague Place, Suffolk Place and Maitland Place, Queen's Park and Czar Street.

The construction of these crossings has very extensively eaten into the small funds appropriated for this service, so that the ordinary work of crossing repair and construction has suffered very materially. The crossing account is one that will require to be considerably augmented in the near future, as it is folly to construct any more wooden crossings in the down-town section of the City.

CURBING.

With the small appropriation at the disposal of the Department, the curbing repairs, both stone and wood, have received the best attention possible.

SIDEWALKS.

The mileage of wooden sidewalks constructed as Local Improvements during the year, was slightly in excess of 32 miles, made up as follows:

4 ft.	9.25 miles.
5⅓ ft.	5.46 miles.
6 ft	16.70 miles.
Miscellaneous	0.63 miles.
Total	32.04 miles.

To construct the above 32.04 miles of sidewalks necessitated the use of 2,578,635 feet of lumber, costing $30,661.29; and 69,442 lbs. of nails and spikes. The labor amounted to $10,579.52. The total cost was $46,536.17.

For the reason that lumber and nails have increased very materially in price, it is to be hoped that, in future, ratepayers will adopt concrete or brick, in lieu of wooden sidewalks. There is no doubt whatever that a permanent walk of the class suggested is more economical than wood.

The change in the law that has been effected, conferring power on municipalities to construct wooden sidewalks in the public interest, notwithstanding any petitions that might be submitted against the work by the property owners, has been of great value to the Department. There have been a few instances where property owners have persistently opposed the construction of sidewalks, in the expectation that the same would be constructed out of the general rate of taxation. For this reason they petitioned against the construction of the walks as Local Improvements.

Pursuant to Order of Council, the undermentioned sidewalks were constructed out of the general rate; the property fronting upon the sidewalk being owned by the City:

Queen Street, n.s., fronting Leslie Park; width, 6 feet ..... cost $ 53 01
Lake Shore Road, s.s., from 1,460 feet west of Howard Park entrance to Windermere Avenue; width, 6 feet..... cost 334 04
Adelaide Street, n.s., from Brant to Maud; width 6 feet..... cost 96 75
Cherry Street, west side, from Cherry Street Bridge to drawbridge over Keating Channel; width, 4 feet ..... cost 187 51
First Avenue, n.s., from Bolton to DeGrassi; width, 8 feet ..... cost 74 95

I enclose a list of the wood walks constructed as Local Improvements in the different Wards, giving details as to width, length, material and cost individually.

ISLAND PARK SIDEWALK.

Pursuant to Order of Council, an 8-ft. wooden sidewalk was constructed at Island Park from the Wharf to Hallam's Bridge, a length of 1,400 feet, at a cost of $445.51.

EASTERN AVENUE CINDER PATH.

A cinder path was constructed on the south boulevard of Eastern Avenue, from the Grand Trunk Railway Crossing to a point 450 feet east of Pape Avenue, at an average width of 6½ feet.

STREET NUMBERING.

This service has consisted, I might say entirely, of putting up numbers here and there throughout the City where they became loose, broken, or on new houses. The City has not been re-numbered since 1889, and there are many streets that require almost immediate attention in the re-numbering; and I think a contract for the supply of house numbers and tablets, etc., might be awarded during the coming Fall or Winter, so that the work of re-numbering, etc., might be done during the early Spring or Summer of 1901.

HOUSE OF INDUSTRY STONE.

During the early Spring 106 toise of stone were broken at the House of Industry, for road repairs, by the occupants of the Institution.

NORTHERN CITY STABLES.

A drain was constructed at the above stables, on complaint of the Toronto Railway Company that their premises were being flooded by the water from these stables. The drain will be of great value, and materially improve the heretofore insanitary condition of these stables.

SIDEWALK EXTENSIONS.

During the year the sum of $2,112.05 was paid to the City Treasurer for sidewalk extensions, and on Miscellaneous Account the sum of $904.73 has been paid. The sidewalk extensions are for short stretches of walk, and for increased width of sidewalk over that recommended as Local Improvements.

STREET OPENING PERMITS.

A deposit of $10 for wooden sidewalks, and $20 for stone walks, is exacted as a guarantee that these walks will be properly restored when they are taken up, and on the restoration of same, the deposits

are refunded. Under this heading, permits to the number of 45, amounting to $475, have been granted to persons who have required to temporarily lift sections of sidewalk. Of the above amount, $415 has been refunded.

FREE BATHING.

Free bathing for boys was placed under the supervision of this Department. At the west point (Island), it commenced on July 3rd, and was closed September 9th. 46,436 boys patronized this place during that period. The bathing spot for the east end was that used in former years, namely, east of the Eastern Channel on the Island, on the lake side. This place was opened June 19th and closed September 9th. 27,060 boys used this point. The boys were carried to these points by free ferry. The River Don, north of Winchester Street, was also made use of for free bathing, and 22,875 boys used this spot between July 3rd, and September 9th, At each of these places a man was placed in charge, to control the boys and also to render any assistance when necessary, should the boys get beyond their depth, etc. A shelter was erected at the foot of Woodbine Avenue, but nobody was placed in charge.

SNOW REMOVAL (SIDEWALKS.)

During the Winter of 1898-99, snow was removed from about 275 miles of sidewalks, at a rate of 3 mills per foot frontage each cleaning. The cost of this work was assessed against the property fronting which the cleaning was done. This service was also the means of giving employment to a large number of men at a season of the year when there is little or no laboring work.

SCAVENGING.

During the year there was a total of 129,617 loads of ashes and garbage collected throughout the City, Of this quantity, 99,387 loads were ashes, and 30,230 loads were garbage. All the garbage was carted to the Eastern or Western Crematories, and there consumed. The ashes have been deposited at the dumps, and have also been used for coating some of the unimproved mud roads.

Since making a summary of the work for 1898, the filling in of the Esplanade, under agreement with the Canadian Pacific Railway, with collections in the district specified in such agreement, has been

completed, and the collections from about this area are now being deposited on the block that has been cribbed on the water front between Bay and Lorne Streets.

This service is one that most every city throughout the continent is devoting more or less attention to. During the year there have been a number of deputations visit this City, with a view to collecting data as to the manner of collecting, and the subsequent cremation of the garbage; and also the disposition of ashes and sweepings. At the Convention of the American Society of Municipal Improvements, which was held in this City (City Hall) in October, considerable attention was devoted to the subject. The trend in the American cities seems to be towards making a daily collection in the central or business section of the city, for the reason that there are practically no alleys in the cities that have decided on, or are looking towards, a daily collection. The same conditions do not apply to Toronto, inasmuch as there are few cities that have more alleys in proportion to street mileage than Toronto, as, with few exceptions, properties are backed by lanes or alleys.

A proposition was made to erect a third crematory on the water front, in the region of the Water Works Dock. A Sub-Committee has been appointed, and I hope they will take the matter up. I am sure I can convince them that it would be an economical expenditure to provide for a crematory at this point. It would provide for the cremation of garbage, etc., from a very large area in the centre of the City, which at present has to be hauled more or less about two miles.

I think that a By-law should be passed by Council, providing that separate receptacles for both ashes and garbage, of standard sizes, that could be conveniently handled by one man, should be provided by householders, etc., for their garbage and ashes. This would obviate the necessity of dumping the ashes, etc., on the pavements, to load into the carts. At present we find the ashes and garbage placed on the streets and lanes in all kinds of receptacles, from galvanized iron tins to frail fruit baskets.

This By-law might also include a provision that loose paper, etc., and material of this nature, should be tightly bundled before it is placed on the lanes and streets for collection by the scavengers.

This would get rid of a great nuisance that is at present experienced on account of the quantity of loose paper that is found blowing on the streets.

I attach a copy of the paper read by myself at the Convention of the American Society of Municipal Improvements, which is referred to above.

ISLAND SCAVENGING.

A semi-weekly collection was made to all parts of the Island in the summer season. The service was begun on May 17th, and closed October 6th.

STREET CLEANING.

The funds appropriated for this service cover a great deal more work than what appears under the heading of "Street Cleaning." This account includes the cost of cleaning bridges, wings of sidewalks, street crossings, etc., of snow in the winter season, and in the summer season the work of sweeping by the Patrol, or Orderly System, of the main asphalted streets, and the other streets by the machines; and also flushing King, Yonge and Queen Street asphalt pavements. This service, together with the asphalt service, has received, if it is possible, more attention than any other service under my supervision. These works will increase in cost from year to year, as suitable dumps are very difficult to obtain, and the haul is from year to year increasing. Many thousands of loads of sweepings have been deposited on the block that has been cribbed at the foot of Bay Street, on the water front. This has been a particularly good dump for the centre section of the City. Some considerable number of loads of sweepings have been deposited on private property, pursuant to request of the property owners.

The expenditure for cleaning the asphalt pavements, by the uniformed Patrol men, was $11,748.47.

The mileage (lineal) of streets cleaned was 1,730: and the number of loads of sweepings collected was 38,880.

The disposal of sweepings and scrapings will require to be taken up by the Department, with a view to providing some adequate provision for the reception of this material, by hauling by the trolley system to Ashbridge's Bay, or to some other place.

SNOW REMOVAL (ROADWAYS).

On March 17th, 18th and 19th a very heavy snow storm was experienced, which necessitated the removal of 4,196 loads of snow from the transfer points, intersections, etc.

STREET WATERING.

The street sprinkling by waggons necessitated the distribution of 105,757 loads, representing 52,641,000 gallons.

The past season was the sixth for the trolley system of street sprinkling of the track allowances. The trolley tanks (three in number) traversed 19,048 miles, costing $3,095.31. This is at the rate of 16¼ cents per mile. The water used in this service was 28,845,800 gallons; making a total for the whole service of 81,486,800 gallons.

STREET FLUSHING.

Pursuant to order of Board of Control, Yonge Street, from Davenport Road to King; King Street, from Sherbourne to Simcoe; and Queen Street, from Niagara to River, were flushed at night, semi-weekly, between April 24th, and October 12th. This was charged to the "Street Cleaning," account, the cost of which was $1,408.43.

I have given some considerable study to removing the dust on Yonge Street, as there seems to be a greater amount on this thoroughfare than any other asphalt pavement in the City, and I find that it is owing to so may streets that radiate from this street, both east and west, that are macadamized. These streets are macadamized only in the centre, and the sides are unimproved, with the result that the vehicles that turn from these streets on to Yonge Street take with them quite a percentage of mud, etc., which is ground up into dust, and is what causes the annoyance.

WESTERN BREAKWATER.

The Breakwater running south from opposite Queen's Wharf, was planked with 3-in. plank 12 feet wide, for its entire length, 575 feet.

EASTERN BREAKWATER.

The planking on the Eastern Breakwater, at Centre Island, was continued from the point that was done in 1898, namely 1,839 feet

east of Chippewa Avenue, a further distance of 1,200 feet. In addition to this, a piece 586 feet long was planked, commencing at the west end of the Breakwater, extending east to Chippewa Avenue. No scantling was necessary in this planking, as the planks were laid on top of the cross pieces.

Yours faithfully,

JOHN JONES

Street Commissioner.

LIST OF PLANK SIDEWALKS CONSTRUCTED BY STREET COMMISSIONER'S DEPARTMENT AS LOCAL IMPROVEMENTS DURING 1899.

District No. 1.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (ft. B.M.)	Nails (lbs.)	Total Cost.
								$ c.
Austin	N..	Pape	581 ft. east	4	581	6,214	200	271 99
					curbing	1,937	.....	.....
					spikes	.....	50	.....
					c.p'sts	1¼ cords	.....	.....
Allen	S ..	Broadview ...	Bolton	4	825	8,816	300	160 97
Bain	S ..	Pape	Carlaw	4	582	6,224	200	121 02
Cherry	E ..	Front	Mill	5⅓	439	6,476	200	130 00
Danforth...	S ..	Broadview ...	Pape	4	3,714	40,040	1,100	623 01
Eastern	S ..	St. Lawrenee .	Water	4	315	3,376	100	81 40
Elliott	S ..	Broadview ...	Bolton	6	822	13,168	350	209 52
First	N..	Bolton	DeGrassi	8	228	.....	.....	.....
Howland ..	W..	Gerrard	Victor	4	511	5,468	200	103 95
Knox	E ..	Queen	Eastern	4	596	6,374	200	112 79
Lewis	B ..	"	"	4	1,901	20,310	600	366 18
Morse.....	E ..	"	"	6	960	15,081	450	265 13
Mill	N ..	Water	Beachell.....	5⅓	495	7,276	200	130 19
"	N ..	"	Cherry	4	706	7,584	200	119 69
Queen.....	N ..	Verral	150 ft. west.....	12	150	4,456	150	80 68
"	S ..	Broadview ...	East side Smith's Blk	6	557	8,928	300	161 91
* "	S ..	Lewis	Broadview	6	259	4,160	200	80 04
† "	S ..	Caroline	Pt. 117 ft. e. of Knox	6	2,546	40,864	1,000	807 26
					20 cedar posts			
Saulter.....	S ..	Queen	G. T. Railway.....	5⅓	843	12,314	400	259 52
Sumach	W..	Wilton	67 ft. north.....	8	67	1,356	100	27 38
"	W..	Queen	91 ft. north.....	16	91	3,534	200	62 92
Tate	N..	Water	Beachell	4	504	5,392	200	92 61
Vine	W.	Eastern	306 ft. south.....	4	306	3,280	100	55 32
Wyatt	B ..	River	Sumach	4	1,179	12,607	400	230 23

* Not laid in front of Dr. Allen's property, Nos. 719 to 725, 57 feet.

† Not laid in front of Mr. Wright's property, No. 1195, 37 feet.
Not laid in front of Mr. Stone's property, Nos. 1225 to 1227, 53 feet.
Not laid in front of Mr. Davies' property, Nos. 1301 to 1305, 43 feet.
Not laid in front of Mr. Ashton's property, 12 feet.

DISTRICT NO. 2.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost.
								$ c.
Aberdeen ..	N..	Ontario	276 ft. east	4	276	3,118	100	91 78
					Cedar	posts...	3	
						Spikes	20	
Amelia.....	N..	Sackville.....	Sumach	6	667	10,674	250	207 11
Berkeley ...	E..	Gerrard.....	130 ft. north.....	5⅓	130	1,994	75	43 80
Bowman ...	E..	Carlton	North end.....	5⅓	240	3,520	100	83 10
Bright	B..	King	Queen.....	4	1,033	11,216	300	180 66
Duchess ...	N..	Berkeley.....	Parliament	6	322	5,274	125	87 94
						Spikes	10	
Eastern	N..	Sumach	Sackville	6	447	7,248	150	166 23
					Curbi	ng 573		
						Spikes	10	
Elm & Beau	N. & W.	Glen.....	South side of Mr. Jameson's prop'y.	5⅓	490	7,187	200	132 14
*Front	S ..	Trinity	Cherry	6	626	9,824	250	164 92
Frederick ..	E ..	King	Duke	5⅓	276	4,119	125	65 45
						Spikes	5	
Front	S ..	Berkeley.....	Princess.....	6	698	11,732	300	206 57
						Spikes	35	
Front	N..	Parliament....	Berkeley	6	333	5,552	150	100 14
						Spikes	20	
†Gifford....	B .	Carlton	Spruce	6	836	12,736	350	274 34
‡George ...	W .	Front.....	King.....	10	287	7,087	175	116 40
						Spikes	5	
" ...	E ..	Duke	Duchess.....	6	436	6,356	175	114 36
						Spikes	5	
Gerrard	N..	Parliament....	Sackville	6	786	12,702	300	208 34
						Spikes	10	
Huntley ...	W..	Elm	South Drive.....	4	626	6,779	200	121 43
						Spikes	10	
Howard ...	N..	Glen.....	Parliament	6	1,072	17,788	450	321 46
						Spikes	50	
" ...	S ..	Ontario	"	6	670	10,792	250	179 99
						Spikes	5	
Ontario	W..	Howard	Wellesley	6	1,355	21,680	500	361 48
"	W..	Wilton	234 ft. north.....	6	252	4,207	100	70 50
						Spikes	10	
"	W..	Carlton	321 ft. north.....	5⅓	323	4,780	150	77 84
						Spikes	5	
§ "	E..	Howard.....	Wellesley	5⅓	1,346	19,022	550	393 73
‖ "	E ..	Winchester ...	"	5⅓	835	11,670	300	219 17
Parliament..	E ..	155 ft. n. of St. David.	105 ft. further north.	8	105	2,240	75	39 87
" ..	W..	40 ft. n. of Prospect.	Wellesley	6	315	5,040	125	79 97
Poulette....	E ..	Sydenham	240 ft. north.....	4	240	2,560	100	41 93
Princess....	W..	Esplanade	Front	5⅓	472	6,987	200	109 44
						Spikes	5	

* Not laid in front of G. W. Gooderham's property, 12 feet.

† Not laid at asphalted lane entrances, 40 feet.

‡ Not laid in front of No. 46, 12 feet.

§ Not laid at lanes, 49 feet.

‖ Not laid at lanes, 41 feet.

DISTRICT No. 2—*Continued.*

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost.
								$ c.
Parliament..	E..	Front.....	87 ft. north.....	6	107	1,902	50	32 66
						Spikes	15	
Queen.....	N..	Sackville.....	339 ft. west.....	8	356	7,596	200	151 73
St. James ..	N..	Ontario	Rose	5⅓	303	4,444	125	73 15
Sackville ..	E..	Winchester ...	Carlton	6	496	8,158	175	128 09
						Spikes	10	
" ..	E..	St. Davids	62 ft. south	6	79	1,264	50	21 74
" ..	W..	"	Wilton	6	445	7,216	200	117 83
						Spikes	5	
" ..	W..	Amelia	Wellesley	6	312	5.114	100	82 45
						Spikes	5	
Salisbury...	N..	Sackville.....	East end	6	483	7,800	200	139 07
						Spikes	5	
" ...	S ..	"	East end	4	320	3,468	100	56 46
South Dr.	N & W	East limit of No. 34.	North limit of No. 52.	4	281	2,998	100	60 36
Sydenham..	N..	Parliament....	Sumach	6	1,433	23,384	600	368 38
						Spikes	20	
Sackville ..	E..	Winchester ...	Salisbury	6	235	3,760	150	71 03
" ..	W..	Oak	Gerrard	6	439	7,394	200	262 27
						Spikes	35	
						Curbing 1,552 Cedar posts laid		
Spruce	N..	Gifford	139 ft. east	6	151	2,252	75	41 69
Salisbury...	S ..	Sackville.....	East end	4	320	3,468	100	56 46
Taylor	S ..	Sumach	105 ft. west.....	4	107	1,140	50	20 16
Wellesley ..	S ..	Parliament....	Sumach	6	1,445	23,020	550	517 46
" ..	N..	"	"	6	1,400	22,192	600	492 95
						Spikes	20	
" ..	S ..	Sherbourne ...	Bleeker	6	212	3,394	75	56 16
Wilton	N..	" ...	Seaton	6	373	6,024	150	99 05
						Spikes	5	
Winchester.	S ..	Sackville.....	Sumach	6	651	10,509	275	228 21
						Spikes	5	

DISTRICT No. 3.

Albert	N..	James	Chestnut	6	896	14,306	350	221 13
"	S ..	Teraulay.....	"	6	527	8,432	200	140 36
Alexander..	S ..	83 feet east of Yonge.	Church.....	6	860	13,760	350	204 88
Avenue Pl..	S ..	Avenue Rd ...	Hazelton	6	452	7,232	200	118 71
Birch	S ..	Yonge	Gange	5⅓	402	5,896	200	103 14
Bismarck...	N..	Park Rd.....	East end	4	501	5,344	175	80 90
Blackmore L	N..	Davenport	"	4	201	2,144	60	33 36
Bond..... ..	W..	Wilton	Gould	6	602	9,632	250	312 15
Breadalbane	S ..	Surrey	154 ft. east	6	154	2,792	60	59 32
Belmont ...	N..	Yonge	361 ft. west.....	4	361	3,851	100	58 81
Bloor	S ..	North	82 ft. east	8	95	2,628	55	29 84
†Bond.....	E..	Shuter	Gould.....	6	988	15,808	400	243 42
Belmont....	S ..	Yonge	McMurrich.....	5⅓	369	5,412	150	123 89

* Not laid at asphalt lane entrance, 9½ feet.

† Not laid in front of Holy Blossom Synagogue, 69 feet; and opposite Congregational Church, 102 feet.

DISTRICT NO. 3—*Continued.*

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost.
								$ c.
Bismarck...	N..	Yonge	Park Rd	4	652	6,955	200	171 40
Chippewa ..	E..	Lake Shore....	1,093 ft. north	6	1,093	19,926	800	444 56
					Board	s 344		
					Cedar	posts 2	cords	
Commercial.	N..	Jarvis	Francis	4	126	1,344	50	21 75
*Cottingh'm	N..	Gange	473 ft. west.....	5⅓	463	6,791	200	113 02
Charles	S ..	Church	388 ft. west.....	6	388	6,208	175	106 57
Chestnut ..	E..	Albert	Agnes	6	972	15,552	400	239 70
" ..	W..	Christopher ...	Chestnut Pl.....	6	441	7,056	175	106 40
" ..	E..	Queen	Albert	6	390	6,240	150	103 48
Christopher.	B ..	Chestnut.....	University	4	911	9,718	350	149 66
Davenport..	S ..	Hazelton.....	65 ft. west.....	4	65	694	20	11 16
Elizabeth ..	E..	101 ft. north of College.	Grenville.....	6	120	1,920	50	29 28
" ..	E..	Gerrard	Hayter.....	6	250	4,000	100	61 91
Gloucester..	N..	Yonge	Church.....	6	942	15,072	350	546 24
Gange.....	E..	Cottingham ..	Birch	4	175	1,867	60	32 73
"	W..	" ..	"	4	175	1,867	60	29 51
Hayter.....	S ..	Mission	Teraulay	6	160	2,560	60	39 84
James.....	W..	Albert	92 ft. s. of Louisa...	6	162	2,592	60	43 24
"	E..	"	Louisa	6	246	3,936	100	61 91
Lorne.....	E..	Front.....	Esplanade.....	6	430	7,216	200	114 02
Millstone La	N..	York	East end	4	444	4,736	150	76 99
Maitland ..	N..	Church	Jarvis.....	6	655	10,480	250	306 68
North.....	W..	St. Mary.....	Czar	6	250	4,000	100	63 82
Park Rd....	E..	Bismarck	Collier	4	215	2,294	75	36 22
"	W..	Bloor	"	6	560	8,960	200	149 40
Price.....	N..	Yonge	East end	4	521	5,558	150	83 13
Reynolds...	E..	Collier	160 ft. north.....	4	160	1,707	50	27 45
Richmond..	N..	York	Simcoe	6	657	10,512	250	160 22
Roxborough	S ..	Yonge	Scarth Rd.....	4	2,031	21,664	600	336 38
Reynolds ..	W..	Collier	127 ft. north.....	4	127	1,355	50	21 74
St. Joseph..	S ..	"	St. Nicholas.....	6	206	3,296	75	50 67
† " ..	N..	Chapel.....	The Park	6	912	14,592	350	223 00
St. Mary...	N..	St. Nicholas...	Yonge	6	207	3,312	75	50 95
" ...	N..	North...	West end	6	613	10,448	300	199 26
St. Nicholas	E..	St. Mary.....	Czar	4	225	2,400	60	39 46
Sarah	E..	Belmont	101 ft. south.....	4	101	1,078	130	16 56
Scott.....	C ..	Front	Esplanade.....	10	332	8,540	225	.....
‡Shuter	S ..	Yonge	118 ft. e. of Victoria.	8	289	6,358	150	92 26
Surrey	E..	Grenville	Grosvenor.....	5⅓	298	4,371	125	131 34
Sheppard...	B ..	Richmond	Adelaide	6	848	13,568	350	214 59
§Teraulay ..	E..	Albert	Agnes.....	6	872	13,952	375	212 25
Wilton	N..	Church	Mutual	6	319	5,104	150	78 15
Yonge	E..	Front	Esplanade.....	12	258	7,360	300	132 92
‖ "	W..	Cottingham ..	North City limit....	6	1,262	20,192	500	315 88
"	E..	Roxborough...	Macpherson	4	472	5,085	150	80 80
"	E..	Severn.....	Rosedale Ravine....	6	1,038	17,832	425	320 25

* Laid only from Gange Avenue westerly 451 feet to the easterly limit of Mr. Macdonald's property.

† Not laid in front of No. 40, 11 feet.

‡ Not laid in front of Massey Hall, 119 feet.

§ Not laid in front of Nos. 33 to 37, 60 feet.

‖ Not laid at Can. Pac. Railway tracks, 21 feet

DISTRICT NO. 4.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost.
								$ c.
*Adelaide..	S..	Portland.....	285 ft. east	6	283	4,528	100	73 70
Augusta....	W..	St. Patrick....	Nassau.....	6	1,066	17,056	600	391 47
"	W..	Oxford.....	College.....	6	422	6,752	200	115 33
Baldwin....	S..	Augusta	Kensington	4	335	3,573	150	62 56
"	S..	Beverley.....	McCaul	6	630	10,080	300	234 35
Bathurst ...	E..	Farley.....	Adelaide	6	446	7,136	200	174 29
† " ...	W..	Bloor	Folis	6	1,643	25,968	800	423 59
" ...	W..	King	McDonald Sq	8	335	7,147	200	122 24
Bellevue ...	S..	Denison	West end.....	6	563	9,008	250	204 85
Brant	W..	King	Adelaide	6	424	6,784	200	225 84
			Plank for curb	....	.....	1,414		
			Spikes	....	.....	.....	50	
			33 posts.					
Brunswick..	E..	Lowther	130 ft. north.....	6	130	2,080	100	35 84
Bloor	N..	Bathurst.....	171 ft. east	12	187	5,735	200	93 02
"	S..	Major	Brunswick	6	301	4,816	150	80 84
Caer Howell	N..	McCaul.....	University	6	741	11,856	350	199 87
‡Cecil.....	S..	Huron	Henry	4	273	2,912	100	54 65
College.....	N..	"	Road to Observatory	6	1,065	17,040	500	286 82
Cottingham.	N..	Avenue Rd ...	Rathnally	6	651	10,416	300	172 36
Charlotte...	W..	King	Adelaide	4	449	4,853	150	162 60
			Curbing plank	....	.....	1,737		
			Spikes	....	.....	.....	50	
			26 posts.					
§Davenport.	N..	Bedford.....	Can. Pac. Railway..	4	990	10,160	300	174 73
Denison Sq.	N..	Bellevue	Augusta	5⅓	301	4,415	150	77 98
Division....	B..	Spadina.....	Huron	6	858	13,728	400	291 17
Grange.....	S..	"	Vanauley	6	438	7,008	200	140 36
"	S..	Esther	"	6	377	5,872	150	134 15
"	N..	Beverley	328 ft. w. of McCaul	6	297	4,752	150	81 90
Hackney ...	W..	Woolsley	Grange.....	4	859	9,163	300	150 93
Harbord ...	N..	Robert.....	Spadina	6	424	6,784	200	114 91
Herrick	B..	Lippincott	Borden	4	656	6,997	250	120 72
Huron	W..	College	Cecil	6	638	10,208	300	212 11
Hackney ..	E..	Woolsley	St. Patrick	4	1,165	12,427	450	217 16
John	W..	Queen	114 ft. south.....	6	114	1,824	100	32 86
"	E..	"	Grange.....	12	785	24,457	700	395 97
"	E..	King	Richmond.....	6	858	13,728	400	223 85
Kensington.	W..	St. Andrews ..	Baldwin	6	223	3,568	100	103 19
			Curbing.....	....	.....	744		
			Spikes	....	.....	.....	25	
			80 posts.					
¶King	S..	Bathurst	Peter	6	2,758	44,064	1,300	711 72
Kensington.	W..	St. Patrick....	576 ft. north.....	6	595	9,520	300	153 68
Lennox	B..	Lippincott	Bathurst	4	574	6,123	300	225 20
			Curbing.....	....	.....	1,834		
			Spikes	....	.....	.....	75	
			35 posts.					

* Laid only to a point 273 feet east of Portland Street.

† Not laid in front of No. 822, 20 feet.

‡ Laid only from Henry to Beverley Street.

§ Not laid at culvert commencing 240 feet south of Dupont Street, 19 feet.

‖ Not laid in front of Mr. Williams property, 10 feet.

¶ Not laid in front of Mrs. Cooke's property (No. 633), 4 feet.

DISTRICT No. 4—*Continued.*

Street.	Side.	From	To	Width (feet)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost.
								$ c.
Larch	B..	St. Patrick....	Grange.....	4	696	7,429	300	134 91
*Mercer ...	S..	John	Peter	5⅓	662	9,533	300	161 65
Orde	N..	Murray	University Avenue..	4	333	3,552	150	62 91
Richmond..	S..	York	John.....	6	1,582	25,312	700	404 09
Robert	E..	College	Willcock	6	1,138	16,603	500	375 49
Ross	B..	Cecil.....	College.....	5⅓	1,200	17,600	500	377 82
Russell	N..	Spadina.....	Robert	5⅓	224	3,285	100	64 83
St. Patriek.	S..	Bathurst	Denison.....	6	870	13,920	400	219 88
† " ..	S..	Denison.....	Esther	6	231	2.080	50	36 37
" ..	N..	"	Spadina	6	1,068	17,088	500	294 08
St. Patrick	S E..	Queen	Stephanie	4	435	4,640	200	80 98
Stewart	S..	Bathurst	Portland	5⅓	678	9,944	300	231 21
Widmer ...	W..	King	Adelaide	6	428	6,848	200	117 93
‡William ..	E..	Caer Howell...	Anderson	6	540	8,640	250	150 27
§William ..	E..	Queen	"	6	1,301	20,816	600	339 42
			DISTRICT No. 5.					
Argyle	N..	Dundas	Givens	5⅓	1,302	4,430	150	105 58
"	N..	Lisgar	Northcote	6	564	9,200	200	253 69
"	N..	Gladstone	"	6	287	4,622	100	75 29
‖Arthur	N..	Crawford	Ossington	6	853	13,648	400	250 25
" ...	N..	Bellwoods.....	Manning	6	452	7,232	225	127 29
Argyle	N..	Dovercourt....	Lisgar	6	302	4,840	100	75 00
"	S..	"	Dundas	6	960	15,368	475	322 70
Arthur	N..	Crawford	Bellwoods	6	1,088	17,552	550	301 14
Bloor	N..	Bathurst	Markham	6	284	4,544	150	80 28
¶Brookfield	B..	Queen	Humbert.....	5⅓	1,217	17,850	600	414 41
Churchill...	S..	Dovercourt ...	Lakeview	5⅓	460	6,747	225	133 74
Defoe	S..	Massey	Strachan	5⅓	151	2,215	75	40 38
Dupont ...	N..	Palmerston ...	Manning	5⅓	630	9,240	300	206 49
Defoe	N..	Massey	Strachan	4	171	1,824	75	33 16
Dewson	S..	Delaware	Concord	4	324	3,456	125	62 63
**Doverc'rt	E..	Bloor	Northumberland....	5⅓	329	4,823	150	87 15
"	W..	"	Shanly	5⅓	1,122	16,456	550	282 46
††Dundas ..	W..	Queen	364 ft. north.....	6	264	4,224	175	74 11
Euclid	E..	College	748 ft. south.....	6	748	11,968	350	299 55
‡‡ "	W..	Queen	Robinson.....	5⅓	548	7,226	250	300 62
"	E..	N. limit of 261.	North limit of 299 ..	6	314	5,024	150	127 31
"	E..	Robinson	Arthur	6	1,284	20,544	625	507 22
			Curbing	....	.....	1,410		
			Spikes	....	.....	.....	50	
			80 cedar posts.					

* Not laid in front of Jas. Robertson premises, 12 feet.

† Laid only to a point 117 feet east of Denison Avenue.

‡ Not laid in front of R. Dinnis' property, 12 feet.

§ Not laid in front of property of Mr. Harris, Nos. 25 to 31, 150 feet; and in front of Mr. Gardner's property, No. 65, 55 feet.

‖ Not laid from Givens Street easterly, 127 feet.

¶ Not laid from Queen Street northerly, opposite property of Mr. Vogan, 99 feet.

** Not laid in front of Nos. 767 and 769, 32 feet.

†† Except 100 feet in front of City Yard and Fire Hall.

‡‡ Not laid in front of No. 10, 40½ feet.

DISTRICT NO. 5—*Continued*.

Street.	Side.	From	To	Width (feet)	Length (feet)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost. $	c.
Euclid	E	Robinson	Queen	5⅓	564	7,520	275	239	50
Harrison	N	Lakeview	Ossington	5⅓	475	6,967	225	126	59
"	N	"	Dovercourt	4	467	4,981	150	90	35
Humbert	S	Dundas	Brookfield	4	280	2,987	100	54	05
Harbord	N	Clinton	Manning	6	299	4,784	150	84	10
"	S	Bathurst	Markham	4	291	3,104	100	58	22
King	N	Strachan	Walnut	6	791	12,656	400	215	75
"	S	Massey	Strachan	6	160	2,560	75	45	37
Lobb	S	Shaw	Crawford	5⅓	276	4,048	150	70	84
Markham	E	100 ft. north of London.	200 ft. further north	4	200	2,133	75	38	19
"	E	316 ft. north of Arthur.	College	6	1,186	18,976	550	444	69
"	E	Queen	Robinson	6	548	8,912	275	154	68
			Spikes				25		
Niagara	S	Tecumseth	Wellington	6	475	7,600	200	128	65
North McDonell Sq.	N	Bathurst	426 ft. west	4	426	4,544	151	78	41
Ossington	W	Dewson	Bloor	5⅓	1,832	26,870	900	565	46
Shaw	W	Halton	Argyle	6	496	7,936	225	134	44
South McDonell Sq.	N	Bathurst, thence northerly 186 ft. thence easterly 203 ft.	331 ft. west	6	722	11,552	350	194	76
Sully	W	Arthur	Crawford St. Ext'n.	5⅓	1,284	18,832	600	528	97
Shannon	S	Dovercourt	Ossington	5⅓	980	14,374	500	251	08
*Shaw	E	Bellwood's Pk.	182 ft. south	6	161	2,576	75	44	75
Shaw	E	182 ft. south of Bellwood's Pk.	Queen	6	1,353	21,648	650	501	27
Tecumseth	E	Niagara	Wellington	6	230	3,680	100	66	67
Turner	N	Tecumseth	West end	4	420	4,480	150	78	12
Wellington	N	Niagara	235 ft. east of Stafford	6	814	13,156	400	222	69
"	N	Strachan	Stanley Park	6	548	8,768	275	151	39

DISTRICT NO. 6.

Abell	W	Queen	362 ft. south	4	374	4,262	100	73	24
Afton	N	Lisgar	Beaconsfield	6	494	7,888	175	159	10
Beaconsfield	B	Queen	Afton	6	2,886	46,401	1,000	996	84
College	N	St. Clarens	Sheridan	5⅓	1,060	15,712	300	245	05
"	N	Rusholme	130 ft. east	4	156	1,664	50	28	37
"	S	"	Dovercourt	5⅓	479	6,821	175	112	13
Delaney Cr.	B	Brock	Wyndham	4	1,716	18,258	600	331	17
Dundas	S	"	St. Clarens	6	690	11,434	250	177	56
"	N	Dovercourt	Coolmine	6	247	3,982	100	62	09
Dufferin	E	Bloor	600 ft. south	4	612	6,750	200	121	21
"	E	College	Sylvan	4	736	7,849	200	129	11
"	W	"	Dundas	5⅓	1,017	15,302	350	279	02
"	W	South side of house No. 390.	206 ft. north	4	206	2,208	206	34	53
Edwin	W	North term.	210 ft. south of William Avenue.	4	1,423	15,275	450	256	37
Florence	N	Brock	Sheridan	4	514	5,544	200	92	06
Franklin	W	Royce	Irving	4	649	6,960	200	114	18

* Not laid in front of No. 251, 21 feet.

DISTRICT NO. 6—*Continued*.

Street.	Side.	From	To	Width (feet)	Length (feet)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost.
								$ c.
Fraser	W.	King	213 ft. south	5⅓	233	3,403	75	63 77
Gladstone	E.	Argyle	325 ft. north	6	340	5,468	150	137 92
"	W.	Dundas	Trafalgar	6	1,096	18,673	400	379 93
"	W.	Trafalgar	Waterloo	6	303	4,833	100	74 02
Howard Pk.	N.	Indian Rd.	500 ft. east	4	522	5,574	175	89 59
King	N.	Dufferin	Dunn	5⅓	1,579	23,093	700	362 10
*Lisgar	E.	Queen	Afton	6	1,504	24,421	500	505 09
Marshall	S.	Brock	135 ft. east	4	150	1,600	50	25 27
Marion	B.	Fuller	Sorauren	5⅓	912	13,568	400	308 93
Muir	N.	Brock	Sheridan	4	436	4,634	150	91 47
Noble	N.	"	300 ft. east	5⅓	315	4,827	125	80 81
Northcote	W.	Argyle	Afton	5	472	6,876	150	169 49
"	E.	Queen	"	6	1,438	24,001	500	589 20
Osler	E.	Royce	North end	4	974	10,409	300	178 26
Roncesvalles	E.	Dundas	Lucas	4	2,258	24,610	700	427 14
Royce	B.	Perth	West end	4	2,405	26,637	700	433 28
Shirley	N.	Brock	St. Clarens	5⅓	606	8,938	200	138 04
Sheridan	E.	Dundas	Fisher	4	243	2,602	75	47 43
St. Helens	W.	"	South of Pearce	4	1,592	17,907	500	313 61
Trafalgar	B.	Dufferin	Gladstone	4	724	8,334	250	231 46
†VanHorne	S.	"	Westmoreland	4	1,192	13,059	400	221 04
Wright	S.	Sorauren	633 ft. west	5⅓	648	9,540	250	185 48
West Lodge	W.	North term.	553 ft. south	5⅓	553	8,063	200	172 76
Wyndham	S.	Brock	St. Clarens	4	557	5,961	150	98 43

* Laid only from Queen to a point 491 feet north of Argyle.

† Not laid in front of Gold Medal Man'g Co.'s property, 69 feet.

AN OUTLINE OF THE SYSTEM OF GARBAGE COLLECTION AND DISPOSITION

IN THE

CITY OF TORONTO

BY THE

STREET COMMISSIONER, MR. JOHN JONES.

At the request of Dr. Woodward, Chairman of the Committee on garbage disposition, in connection with this Convention, I beg to submit a few facts and details bearing on the Scavenging service as carried on in this City under my supervision.

I must explain at the outset, however, that I have little really new to add to the remarks I had the privilege of addressing to this Convention on the subject in question, at the meetings held in Cincinnati and Washington. All that I can hope to do therefore is to refresh your memories on what I said on the occasions I have just alluded to, while going a little more into the details of our system, and adding some facts relating to the expenditure, and other items connected with the service for the year ending December 31st., 1898.

I purpose also to give the Convention some information regarding the construction, method of operating, and expenditure involved in running the Crematories, where the garbage is consumed, which has been kindly furnished me by our esteemed City Commissioner, Mr. Coatsworth, under whose supervision they are conducted.

One important advantage I may point out, namely, the holding of the Convention here will afford the members an opportunity, as Dr. Woodward mentions in his letter, "of seeing how such work is accomplished in Toronto," adding also that "it will be of especial interest to learn the details." As head of the Department having control and supervision of this very important service, I extend a cordial invitation to the members, and any of their friends who may be visiting our City, to avail themselves of the opportunity to examine our system of conducting the Street Cleaning, Street Watering, Scavenging, and other branches of municipal work belonging to the Department. The City yards, stables, shops, docks, etc., will be open for your inspection at all times, and it will give me the greatest pleasure to afford the members and their friends any information they

may desire. In extending this invitation I know that I am voicing the sentiments of His Worship the Mayor, and Council, whose earnest wish, together with the citizens at large, is that your visit may be made as pleasant and profitable as possible.

The total area of the City, including the Bay and Island, is 13,976 acres, of which 10,500 acres are occupied. The mileage of the streets is 258.30, and of the lanes or alleys about 75 miles; the latter nearly all unpaved. Our population is about 230,000; the buildings number 41,500, of which 36,418 are dwellings, and the balance (5,082) business places.

For the operation of the Scavenging service we have divided the City into two districts, eastern and western, each being in charge of an inspector, who also has charge of the Street Cleaning and Street Watering Branches in his district. These districts are again laid out in sub-divisions, the number of which throughout the City is 29. Each of these sub-divisions is again divided into "beats" or routes, one cart or team waggon being allotted to each "beat"; from eight to twelve carts on an average being required for each sub-division. In order to ensure the proper performance of the work, and at the same time be able to locate any driver who may neglect his duty, or in other ways give cause for complaint, I have appointed one driver in each sub-division as head, or senior over the others, who is held responsible for the work being properly performed in his particular sub-division, and whose duty it is to investigate, and report on all complaints that may affect his staff of drivers, to the inspector of the district, by whom the facts are transmitted to the office. Moreover each cart bears a number, whereby any dereliction of duty can be more readily traced to the right party. The central portion of the City, which is the most thickly populated, and contains most of the business houses, is covered by the carts twice weekly; the remaining section, comprising the residential portion and outskirts, having a weekly collection only.

Employed in this work we have 120 horses, with carts and waggons of varying capacities, all the property of the City, built and kept in repair at our own shops. We have three stables for our horses—one in the western, one in the eastern and one in the northern section of the City.

Coming now to the statistics for last year, we removed altogether 115,679 loads, of which 35,085 loads were garbage, and the remainder, namely, 80,594 loads, were ashes. It may be well to explain here that the term garbage covers all substances that are combustible. Of pure garbage, that is, kitchen refuse, comprising animal and vegetable matter, the proportion of the aforesaid quantity removed last year was only about one-twelfth, or 8.33 per cent., the remainder consisting of brushwood and debris from lawns and gardens, clippings and waste ends of cloth, leather, etc., from factories and warehouses, waste paper, and odds and ends generally that will burn, all of which was disposed of at the crematories. It may be a matter of surprise to some of the gentlemen present that the percentage of pure garbage is so small. One reason is, practically all the refuse from our large hotels, and boarding houses is sold to persons maintaining piggeries outside the limits of the municipality, who also have men employed to collect the refuse when put out by householders for the scavengers to take away. Another reason is, many families make a practice regularly of burning their garbage in the kitchen stoves. Dead horses are removed by a private firm outside the City, at their own expense.

I am aware that the disposal of garbage, whether by reduction or incineration, is occupying a good deal of attention at present in large cities, both in the United States and in England, some of which have adopted the former process, and I recollect we had an interesting discussion on the subject when the Convention met in Washington last year. I am not prepared to pass a definite opinion on the question as to whether it is profitable for municipalities in general to adopt the reducing process for disposing of garbage, in preference to other methods, as local conditions vary in each case, and the process is not yet beyond the stage of experiment, but I have no hesitation in saying that it would not pay this City to adopt that system in preference to our present system of incineration, inasmuch as the amount of pure garbage we collect is so small.

As I have before mentioned, all combustible matter is sent to the Crematories, and the dry substances form valuable fuel for disposing of the moist collections. Ashes are used for filling-in purposes.

The collections are made from the various sections of the City on the same days of each week; printed cards containing information when the carts make their rounds, the regulations governing the

service, etc., being served on every householder. One of the most important of these regulations prohibits the storing of ashes and garbage in the same receptacle. Under a process of incineration such as we have, it is obvious that the combustible, and non-combustible substances must not be mixed, nor do we find it difficult to enforce this rule. I must confess, however, that we have more trouble in getting citizens to observe another very important regulation, namely, one which prohibits ashes and other substances from being thrown broadcast on lanes or alleys. We have, however, special men appointed to patrol the lanes for the purpose of compelling a proper observance of the rules and regulations governing the service, and we rarely find it necessary to do more than issue a warning to offenders. I may mention also that we have the co-operation of the Police towards this end.

The expenditure on the service last year was $62,482.96, representing a cost per head of population of 27.17 cents, and per load removed of 54.01 cents. The expense of the work is largely increased by the long haul to the dumps where ashes are deposited, none of which are centrally located.

It might be supposed that the proportions of ashes and garbage, so called, would vary considerably in the winter and summer seasons, but we do not find a very great difference. For the information of the Convention, I have selected the returns from a district which is largely residential, for one week, each, in the months of January and July of the current year:

Average number of carts collecting—13.
Month of January—213 loads of ashes, and 80 loads of garbage removed.
" " July —102 " " " 117 " " "

There is, however, much difference in the quality of the matter collected. In winter the ashes are pure and unmixed, but in summer there is a great proportion of sweeping of yards, and out-houses, and such like, all of which is useful for filling low lying lands.

The substances classed under the head of garbage vary but little one month with another.

TORONTO, September 30th, 1899.

JOHN JONES, ESQ.,
Street Commissioner.

DEAR SIR,—In compliance with your request I beg to submit the following statement:

About 1884 the garbage dumps in our City became a nuisance, and for five or six years the subject of erecting a crematory was under consideration by the City Corporation, plans of several kinds of crematories were obtained from England and the United States, all of which were found to be more expensive in their construction than the need of our City warranted, and from information obtained, it was discovered that many of them were offensive in their operation. Deputations from our City Council visited several cities of United States and Canada for the purpose of gathering information on the subject.

In the early part of 1891 the City Commissioner was ordered, by resolution of Council, to construct a crematory by day labor according to plans prepared by himself, a copy of which is herewith appended, having two furnaces each 22 feet long, 10 feet wide and 4 feet high to crown of arch, with iron smoke stack 3 feet in diameter and 100 feet high, capable of cremating 100 cubic yards per day of refuse and garbage. It was erected in the eastern part of the City.

The operation of the Eastern Crematory having proved satisfactory, the Commissioner was instructed, in the early part of 1893, to construct one of a similar kind in the western part of the City, which was completed and put into operation about the 1st of October the same year, the size of the furnaces being 28 feet long by 10 feet 4 in. wide, and 4 feet 3 in. high to crown of arch, with a brick smoke stack 120 feet high, having a cremating capacity of 120 cubic yards of refuse and garbage per day.

The following figures will show the cost of operation, material consumed, in the years named at the two crematories, we give these years in order to show the average:

In 1894, refuse and garbage cremated was 40,000 cubic yards, at a cost of 27½ cents per yard.

In 1897, refuse and garbage cremated, was 54,000 cubic yards, at a cost of 22½ cents per yard.

In 1899, garbage and refuse cremated to September 23rd, 33,000 cubic yards, at a cost of 22 cents per yard.

The eastern crematory cost for construction, in labor and material, for the furnaces and smoke stack	$4,400 00
The wooden building 48 x 98 ft. 22 ft. high and a bridge for approach from street and fencing lot	3,000 00
Making a total of	$7,400 00

The Western crematory cost for construction, being a little larger than the other, with a brick smoke stack, in labor and material, furnaces and chimney	$4,914 00
Building and planking roadway, etc	2,600 00
A total of	$7,514 00

All kinds of garbage, refuse, dead animals, rotten meat, fruit, fish, vegetables, etc., are cremated, cheap soft coal screenings are used as fuel, an average of about two ton per day at both institutions.

There are no offensive odors at any time, emanating from the crematories, they might be placed in the heart of the City and would be no nuisance.

So far as my knowledge goes, from information I have been able to gather for the past ten years on the disposal of garbage, I believe that cremation is the best and most sanitary method of treating it. So far as our City is concerned it is the only system suitable, as we get so much more refuse than garbage.

Yours respectfully,

E. COATSWORTH,

City Commissioner.

WATER WORKS.

REPORT FOR THE YEAR ENDING DECEMBER 31st, 1899.

CITY ENGINEER'S OFFICE,
Toronto, December 30th, 1899.

FINANCIAL.

The total expenditure for the year of the portion of the Water Works Department which is under the control of the City Engineer, amounted to $165,483.54, divided as follows:

Maintenance	$137,538 71
Construction	14,061 24
Renewals	5,650 85
Special Works	8,232 74

The expenditure of the Revenue and Collection Branch, under the control of the City Treasurer, amounted to $24,646.48.

The revenue reported by the City Treasurer	$452,296 09
Interest and sinking fund on debenture debt	222,400 00

DISTRIBUTION.

The total length of mains of all sizes laid during the year is 10,652 feet, divided as follows:

2,553½	feet	of	12-inch	C.I.	pipe.
4,129½	"	"	6	"	"
3,039	"	"	4	"	"
14½	"	"	3	"	"

In addition, 915½ feet of 2-inch wrought-iron service main has been laid and 92 feet of old Furniss cast-iron pipe taken up, leaving a total in use at the end of the year of 257,613 miles of water mains. For details as to number of valves and hydrants, I beg to refer to the report of the Deputy City Engineer.

SERVICES.

714 services were put in during the year.

LEAKS IN MAINS.

179 leaks have been repaired this year, the average cost per leak being $5.09\frac{1}{3}$.

HIGH LEVEL PUMPING STATION.

I beg to call the attention of the Council to the necessity of increasing the capacity of this station. The rated capacity of each pump is about three and a half million gallons in twenty-four hours. Within the past eight years the rate of pumping has increased 53 per cent. During fires, the maximum obtainable pressure, with the pumps running 25 per cent. above their rated capacity, is 65 lbs., and it is absolutely necessary that this condition of affairs should be remedied.

A 12-inch main should be carried down on the south side of St. George Street, from Dupont Street to a connection with the 12-inch main on Bloor Street, and a new five million gallon engine installed at this station to enable the pressure to be maintained. At present, the whole of this district, comprising 3,500 acres and 80 miles of pipe, serving a population of 49,000 people, is supplied by the two 12-inch mains taken off the 20-inch delivery mains at the boundary of the Pumping Station Grounds.

MAIN PUMPING STATION GROUNDS.

The cost of coal used in pumping water with the Blake Engines, was $3.80 per million gallons. This includes coal for banking fires, electric light engine, cellar pump, and syphoning out cellars of engine houses. The cost of pumping with the three low-duty engines was $13.11\frac{1}{3}$ per million gallons, using anthracite coal at $4.10 per ton, as against bituminous coal slack at $2.28\frac{1}{2}$ per ton with the Blake Engine. The total cost of coal for the year for the three low-duty engines was $5,688.87. The same work could have been done by high-duty engines at a cost for coal of $1,468.59. This would have resulted in a saving of $4,220.28 for the year.

TEMPERATURE.

The average temperature of the water supplied during the year was 44.5 deg. Fah., the highest occurring on the second of September, when it was 69 deg. Fah., the lowest being 34 deg. The highest monthly average was 55.7 deg. Fah., for August.

CONSUMPTION AND WASTE.

I beg to call attention to the remarks upon Consumption and Waste, contained in the attached report of the Deputy City Engineer, which I think deserve the serious consideration of the Council.

It will be seen that between 3 and 4 a.m., when there is practically no consumption, water was being pumped at the rate of 15,000,000 gallons per day, or 70 gallons per head of population. It is quite evident that nearly all of this 70 gallons of water is wasted. Mr. Fellowes is of the opinion that more than 60 per cent. of the water pumped is absolutely wasted. I consider that the only true way to prevent this waste is to greatly increase the use of meters, and a thorough inspection of all plumbing fixtures should also be made.

Respectfully submitted,

C. H. RUST,
City Engineer.

Report of Assistant Engineer in Charge of Water Works Construction, Distribution and Maintenance.

CITY ENGINEER'S DEPT.,
Toronto, December 30th, 1899.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—Herewith is submitted a report of the work done by this branch of the Department during the year ending 31st December, 1899:

DISTRIBUTION.

The total length of cast iron mains of all sizes laid this year is 10,652 feet, consisting of:

2,553½	feet of	12-inch	C. I.	pipe.
4,129½	"	6	"	"
3,039	"	4	"	"
14½	"	3	"	"

In addition, 915½ feet of 2-in. wrought iron service main was laid, and 92 feet of old Furniss cast iron pipe taken up, leaving a total in use at the end of the year of 1,360,201¾ feet, or 257.613 miles of water mains.

STOP AND CHECK VALVES.

The number of stop valves placed in position this year, is as follows:

7	12-inch	stop	valves.
15	6 "	"	
3	4 "	"	
2	3 "	"	

One 9-in. valve has been removed, leaving a total of 2,303 stop valves, of all sizes, in use, and 68 check valves.

HYDRANTS.

25 hydrants have been placed on the streets and 4 have been taken out, the total number now in use being 3,058. 27 2-way hydrants have been replaced by 3-way hydrants.

SERVICES.

714 services have been put in this year, of which 16 are on the Island.

LEAKS IN MAINS.

179 leaks in mains have been repaired, at a cost of $911.74, exclusive of asphalt repairs, the average cost per leak being $5.09⅓ They were as follows:

6	on 36-inch	main.
3	on 30	"
4	on 24	"
94	on 12	"
1	on 10	"
6	on 8	"
63	on 6	"
2	on 4	"

METER AND MACHINE SHOP.

Sixty new meters have been placed during the past year, and 636 have been taken off, tested and replaced, while 515 have been examined and repaired, without removal. In connection with this work, 71 new meter boxes have been put in, 15 have had new top frames placed on them, and 42 have been repaired. The greater number of Crown Meters, injured by sand in the water, have been repaired, tested and put into service again. A large quantity of work has, as usual, been performed for the Main and High Level Pumping Stations, and the Hydrant and Maintenance Departments.

VALVES AND HYDRANTS.

The following is a statement of the work performed by this Department during the year:

Hydrants.

New valves	74
New jointings	63
Hydrants replaced with repaired hydrants	21
Hydrants replaced with improved S. V. 2-way hydrants	3
Hydrants replaced with improved S. V. 3-way hydrants	21
New chain rings	49
Chain rings repaired	231
New screws	5
New caps	37
Cap leathers	379
Nozzles caulked	183
Hydrants cleaned, repaired, tested and painted	31

Hydrants jacketed and tested complete	10
Hydrants set with bar and chain	21
4-way hydrants drilled, tapped and plugged	17
4-way hydrants, detail work gone over, jacketed and tested	20
3-way hydrants, detail work gone over and tested	50
3-way foot pipes tested	50
Hydrant jackets cut and replaced with short top	31
Hydrants cleaned and painted	2,968
Hydrants packed and oiled	3,426
Hydrants pumped, packed and oiled	1,472
Hydrants frozen, blown out, pumped, packed and oiled	586
Hydrants frozen, fired out, pumped, packed and oiled	96
Hydrant inspections	46,777
Hydrant jackets lowered	785
Hydrants thawed and pumped with boiler	16
Mains blown out	378

Valves Tested.

12-in.	6-in.	4-in.	2½-in.	2-in.
10	41	19	3	32

Valves Repaired.

12-in.	6-in.	4-in.	3-in.
4	18	2	3

Brass Work Tested.

1-in. single cocks	139
¾-in. "	457
⅝-in. "	908
½-in. "	1,112
⅜-in. "	482
1 x ¾ x ¾-in. double cocks	9
¾ x ⅝ x ⅝-in. "	33
⅝ x ½ x ½-in. "	578
1-in. couplings	241
¾-in. "	299
⅝-in. "	641
½-in. "	1,555
⅜-in. "	606
1-in. screwed nipples	224
¾-in. "	192
⅝-in. "	261
½-in. "	432
¾-in. driving nipples	184
⅝-in. "	300
½-in. "	365

RESERVOIR.

The grass has been cut and flowers maintained as usual, and the repairs to the Reservoir bank have been completed. It would be advisable to finish concreting the bottom of the Reservoir and also line the slopes to water line, with concrete, asphalt, or some other impervious material.

STABLES.

The expenditure on account of wages for foreman and drivers (five in all) was $2,433.22.

Shoeing, Veterinary Surgeon, harness and wagon repairs, feed, etc., cost $951.81.

STORE-HOUSE.

The stock has been fairly well kept up, but the Department has been greatly taxed to meet the large increase in materials required, owing to the revival of business and the increase in the building trade, as well as to the very large increase in local improvement works, both in pavements and sidewalks. The balances on hand have been checked and found correct.

ISLAND WATER WORKS PLANT.

Pumping at the Station on the Island commenced on May 2nd, and continued until October 16th, when the Station was closed. During this time a pressure of from 30 to 40 pounds was maintained in the mains, day and night. There were one or two small leaks at service connections, but none in the mains, which is very satifactory, considering that they have nowhere over two feet of covering over them, which condition renders it necessary to empty them each fall, after the Station is closed.

OLD FILTERING BASIN.

This basin, which lies just east of the Island Pumping Station, was filled to zero level last year, and this year the filling was brought up to the general level of the surrounding ground, at a cost of $1,313.54.

HIGH LEVEL STATION.

The pumps at this Station ran 16 hours a day during the year, all necessary repairs being made during the night, when they were shut down. In 1891, water was pumped at the rate of 3,100,000 gallons per day of 24 hours, this year the rate of pumping has been

5,200,000 gallons per 24 hours, or an increase of about 53 per cent. in eight years, or about 6⅔ per cent. per annum. The rated capacity of each pump is 3,500,000 gallons in twenty-four hours, so that in order to keep up the pressure and supply, both pumps are required to be in operation. During fires, the maximum obtainable pressure, with the pumps running 25 per cent. above their rated capacity, is 65 pounds, the ordinary pressure on the main high level district being 40 to 42 pounds.

The 20-in delivery main, which is reduced to 12 inches at the western boundary of the grounds, should be extended to Dupont Street, and along Dupont Street westerly to St. George Street, where it could be reduced to 12 inches, and a connection made with the existing 12-in. main. A 12-in. main should be carried down the east side of St. George Street, from Dupont Street to a connection with the 12-in. main on Bloor Street, and a new five-million gallon engine installed as soon as possible, to enable the pressure to be maintained. At present the whole district, comprising 3,500 acres and 80 miles of pipe serving a population of 49,000 people, is supplied by two 12-in. mains taken off the 20-in. delivery mains, at the boundary of the Pumping Station grounds.

MAIN PUMPING STATION.

No change has been made in the plant at this Station, which consists of two ten-million gallon high-duty Blake engines, one eight-million gallon Worthington engine, one four-million gallon Worthington engine, and one ten-million gallon Inglis & Hunter engine; the three latter being of the low-duty type.

The total cost of operating this Station for the year, was $71,279.65; 7,823,348,217 imperial gallons of water were pumped. Of this quantity 7,390,620,793 gallons were pumped by the high-duty Blake engines, at a cost for coal of $3.80 per million gallons. This includes coal for banking fires, electric light engine, cellar pump and syphoning out cellars of engine houses. The three low-duty engines pumped 433,727,424 imperial gallons, at a cost for coal of $13.11⅓ per million gallons, using Anthracite coal at $4.10 per ton, as against Bituminous coal slack, at $2.28½ per ton, for Blake engines. The total cost of coal for the year for the old engines was $5,688.87. The same work could have been done by high-duty engines, at a cost for coal of $1,468.59, and a saving effected of $4,220.28 for the year, or

sufficient to pay the interest and sinking fund on $75,300. Comment is unnecessary. The Blake engines ran an average of 22 hours 57 minutes a day, or a total of 16,759 hours 35 minutes during the year. The two Worthington and Inglis & Hunter engines ran 2,044 hours 30 minutes during the year.

There is nothing further of importance to report, other than the difficulty of maintaining the pressure during low stages of the lake, owing to the want of sufficient conduit capacity.

Attention was drawn to this fact in last year's Annual Report.

TEMPERATURE.

The average temperature, taken at the City Hall tap, of the water supplied during the year, was 44.5 degrees Fah., the highest occurring on the 2nd September, when it was 69 degrees, and the lowest being 34 degrees for the first four months of the year, the highest monthly average being 55.7 degrees, for August. Further information will be found in the schedule relating to this matter.

CONSUMPTION AND WASTE.

The average number of gallons of water supplied daily during the year was 21,436,569, being 1,884,969 gallons per day more than was supplied in 1898, or an increase of 9 3/5 per cent. The increase in 1898 over 1897 was 6 1/5 per cent., while in 1897 the consumption was less than in 1896, by ½ per cent. There is no doubt that by far the greater quantity of the water pumped is wasted.

This year, taking the population to be 215,000, which the Assessment Department think is a fair estimate, the consumption per head would average 99.7 imperial gallons. Of this the metered water amounts to 12.5 gallons per head. Between three and four o'clock a.m., when there is practically no consumption, water was being pumped at the rate of 15,000,000 gallons per day, or 70 gallons per head of population. Careful measurements of the discharge of the sewers, which were taken recently for sewage disposal purposes, show that the minimum quantity carried off by all the sewers, was at the rate of 15,214 gallons per day, showing a very close agreement with the rate at which water was being pumped between 3 a.m. and 4 a.m.

It is evident that the greater part, if not all, of this 70 gallons was waste water, leaving 17.2 as the quantity used for domestic

purposes. That this quantity is very close to that actually used, the experience of the following cities indicates: At Fall River, the quantity used for domestic purposes is found to be about 11.2; at Lawrence, 16.3; at Woonsockett, 14.1; at Worcester, 14; while Mr. Mansergh states that the average per head per day for domestic purposes for London, Birmingham, Manchester and Sheffield, is from 13 to 25 gallons. So that allowing 10 gallons per head for incurable waste (this being the quantity fixed upon by Mr. Freeman, in his report to the New York Water Board, as being the minimum quantity to which waste can be reduced), metered water at 12.5 gallons, and for domestic purposes, 17.2 gallons, would give a total of 39.7 gallons used for legitimate purposes and incurable waste, leaving 60 gallons as representing what may be called curable waste. In other words, 60 per cent. of the water pumped is absolutely wasted, without benefit of any kind being derived from it. It would, therefore, appear reasonable on economical grounds alone, to take some measures to reduce this waste.

CITY SAND PUMP.

This pump was fitted out and ready for work on April 17th. It was first sent to the mouth of the Bathurst Street sewer, to dredge the deposits at that point, the material being discharged to the south of the south crib-work forming the western entrance to the harbour. Owing to the spring gales and the heavy current caused by them, it was found impracticable to do the work with the pump, as the long length of discharge pipe was repeatedly broken. After about ten days' trial the attempt was abandoned, and the plant moved to Shield's Cut, at the eastern entrance to Ashbridge's Bay, where it was engaged until June 15th, dredging out the entrance, which had become silted up with sand during the winter. After this date, it was removed to the Island to dredge out the channel and fill up low ground, at which work it was employed until the close of the season. The cost of operation, for the entire season, was $4,089.25, and the quantity of material excavated was 56,134 cubic yards. The plant ran the entire seasonwithout having to stop for repairs.

HARBOUR SQUARE CRIB-WORK.

A contract was let to W. J. Bryce & Co., for the construction of some 1,200 feet of crib-work, enclosing an area on the water front of nearly four acres. The whole of the work is above water level, the expenditure thereon, to December 31st, being $25,361.

Yours faithfully,

C. L. FELLOWES,

Deputy Engineer.

REPORT OF ENGINEER IN CHARGE AT MAIN PUMPING STATION

MAIN PUMPING STATION,
Toronto, December 30th, 1899.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—I beg to submit to you my Annual Report for the year 1899.

As you will notice by the following, a considerable amount of repairs have been done, leaving the plant in a fairly good condition, but a large amount still remains to be done to further increase the efficiency of the plant.

Nos. 1 and 2 Worthington Pumps are in good working condition, and also Nos. 4 and 5 Blake Pumps.

No. 3 Engine will require a thorough overhauling. All the boilers are in good condition. The buildings, in general, want a thorough cleaning, in the way of painting and whitewashing.

I would most earnestly urge the installation of a new 10 or 15-million gallon pumping engine, with as little delay as possible. No. 1 old Worthington and Nos. 4 and 5 Blake High Duty engines have been running steadily, night and day, for some months, Nos. 4 and 5 being run at an increase of ten per cent. over their contract rate. Any break-down to either of these engines requires considerable time to repair, and would be a very serious matter, particularly as the boilers of Nos. 1 and 2 engines, which are very old, are liable to fail at any time.

The intake pipe to air pumps and condensers is giving some trouble, owing to the filthy condition of the water, caused by the filling in of the G. T. R. slips on the west side. The sooner this pipe is extended further out into the Bay, the better.

Attached hereto is a statement of repairs made to the plant at this Station during the year.

Respectfully submitted,

ALEX. McRAE,
Chief Engineer.

STATEMENT OF REPAIRS TO MAIN PUMPING STATION PLANT.

SUMMARY OF REPAIRS TO ENGINE NO. 1.

Trap from steam jacket opened up, repaired and placed in good working order.

Main pump examined, found a number of bad valves, spindles and seats; placed in good working order.

Air pumps examined, found in fairly good condition, steam pipe and jacket joints made, replaced where required.

SUMMARY OF REPAIRS TO ENGINE NO. 2.

Opened up main pumps, replaced several new valves, spindles and valve seats.

Pumps left in good condition.

Examined air pumps, replaced several old valves and spindles with new ones.

Examined foot-valves, found in good order.

Made all new joints on main steam pipe and cross exhaust pipe, also all jacket joints. Put a patch on north-west corner low pressure cylinder jacket.

SUMMARY OF REPAIRS TO ENGINE NO. 3.

Opened up main pumps, put in sixteen new wooden valves.

Examined air pumps, found in good condition.

Overhauled boiler feed pump.

Packed plunger and rods.

Owing to No. 3 suction foot valve being cracked, and not being able to hold water for priming, we have placed on suction chamber two $2\frac{1}{2}$-in. connections, so as to attach large hose from hydrant, which enables us to start quickly.

SUMMARY OF REPAIRS TO ENGINE NO. 4.

Examined both cylinders, high and low, and pistons; took off follower, replaced and adjusted.

Opened up receiver, put in five new tubes, plugged up seven, made joints on same.

Made joints on main steam pipes, under Engine Room floor; had main feed pump taken off, found it worn through on bottom, repaired same, had feed pipe of boiler pump taken off, put on one new tee with $1\frac{1}{2}$-in. connection for low pressure trap to discharge into.

Put on one pair of 3-in. flanges, and two pieces of 3-in. pipe, 12 inches long.

Made connection between feed pipe and trap, used three $\frac{3}{4}$-in. Jenkins valves and one $\frac{3}{4}$-in. check valve, five feet $\frac{3}{4}$-in. pipe.

Made six joints on top of boilers.

Took out all valves, spindles, plates and springs, replaced all the best of old valves, and put in 252 new phosphor bronze springs, also 252 new spindles, put in all old plates, put new brass follower on south pump, found old one broken.

Examined air pump, put on one new stuffing box on steam valve, planed valve seats and valve, put new lubricator on auxiliary valve, made joints on steam chests and covers, put $\frac{3}{8}$-in. valve and drain pipe to steam chest, placed in good running order.

SUMMARY OF REPAIRS TO ENGINE NO. 5.

Opened up main pump, all valves, spindles and plates were taken out, replaced by new spindles and valves.

Had main rod, high pressure side, taken off, put in one new large brass in beam end of rod, bored out beam end of rod, had new large pin fitted, brasses re-babbited.

Had high pressure piston rod taken out, tightened piston on rod, put in new metallic packing, examined piston ring, replaced and adjusted, took off low pressure cylinder cover and follower of piston, examined same, replaced and adjusted.

Opened up receiver, one tube taken out, plugged up five, both ends, made new joints on same.

Examined coil in heater, made new joints on same.

Examined all valves and connections, reseated and renewed valves where required, examined low and high pressure traps, repaired same.

Examined jacket pump, reseated valves, packed all glands, made new joints on tank of jacket pump, examined boiler feed pump, put in larger plungers.

Packed all glands, reseated valves, renewed springs where required, placed in good running order.

SUMMARY OF REPAIRS TO FOUR BOILERS OF NO. 1 BATTERY.

Grate bars taken out, furnaces relined, replaced old bars.

Boilers washed out.

Asbestos blow-off cocks examined, replaced three new ones, repaired one.

SUMMARY OF REPAIRS TO FOUR BOILERS OF NO. 2 BATTERY.

Examined all four boilers, found in good condition.

Examined blow-off cocks, put in two new cocks and new blow-off drain.

Reseated all feed valves.

Made two steam pipe joints.

SUMMARY OF REPAIRS TO FIVE BOILERS OF NO. 3 BATTERY.

Made all new asbestos joints on flanges of blow-off pipes on boilers.

Found coil of feed-pipe in smoke box of No. 1 boiler very much corroded. It was taken out and replaced with one straight connection, made new joints on steam pipe to electric light engine.

SUMMARY OF REPAIRS TO FOUR BOILERS OF NO. 4 BATTERY.

Furnaces relined.

Grate bars repaired.

Seven new joints made on main steam pipe, put in new blow-off pipe, front of boiler, used 30 feet of 2-in. pipe, put down plates over blow-off pipe and cemented same.

SUMMARY OF REPAIRS TO FOUR BOILERS OF NO. 5 BATTERY.

Fire boxes relined.

Grate bars repaired.

Main throttle valves of boiler taken off.

Six extra $\frac{3}{4}$-in. bolts put in valve covers.

Valves reseated.

Twenty new joints made on steam pipes, put in new feed pipe, and connections in front of boilers, also new plates over blow-off pipe in front of boilers.

Owing to Hawley Down-draft tubes giving out in boilers, it necessitates considerable repairs to furnaces, having had to replace thirty new tubes during the year.

Two boilers are washed out every week, which gives each boiler a thorough cleaning every four weeks.

SUMMARY OF REPAIRS TO ENGINES NOS. 4 AND 5.

On March 7th, gear on relief valve of No. 5 engine seized, taken down, and repaired. New wheel put on.

On April 10th, No. 5 engine was stopped to repair leaks on high pressure cylinder. Had all lagging taken off, tightened up all joints, made pattern for brass patch, patch made and put on. Had cylinder cover off, replaced, and had cylinder covered with mineral wool. Replaced lagging.

On April 21st, had Spencer's damper regulator removed to boiler room and attached to Nos. 4 and 5 main flue dampers.

On April 24th, stopped No. 4 engine, had main steam valve taken off for repairs.

On April 27th, stopped No. 5 engine to repair break on north-east end of beam, attached to air pump; also bored out piston valve cylinder, faced off auxiliary steam valve and valve seats. New rings made for piston rod. New joints made on steam chests, also bottom joints of cylinders. Shop work done by Northey Engine Co.

On May 10th, put in new key on front end of pillar block. Put in three new studs. Tightened up main engine foundation.

On May 18th, had all gauges, steam, vacuum, back pressure, water pressure, of both engines and boilers, also Edson recording gauge, repaired and tested by Mr. Oliver, expert gauge maker, employed by The James Morrison Co.

On May 22nd, had hole made in chimney outside, removed all soot in bottom of chimney. Had arch made and bricked up with one course of bricks so as to be convenient.

On June 30th, had high pressure cylinder cover taken off, drilled out broken stud in cylinder, replaced by a new one.

On October 3rd, had another break on No. 5, air pump beam; had new end welded on south-west corner of beam; also had new main steam valves placed on cylinders in order to change the motion of pumps, making vast improvement in working of same.

On October 14th, repaired cellar pump in new Engine House; had new piston and plunger rod put in; examined all valves in pump; packed all glands, left in perfect condition; had water syphons placed in position to keep water out of cellar, doing away with steam pump, leaving pump in position as an auxiliary.

On December 6th, put new piston rod in west cylinder of No. 5 air pump.

On December 7th, took down beam end of main rod, engine No. 4; put in large new bolt in link rod, high pressure side.

REPORT OF ENGINEER IN CHARGE OF HIGH LEVEL PUMPING STATION.

HIGH LEVEL PUMPING STATION,
Toronto, December 30th, 1900.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—I beg leave to submit the Annual Report of this Station:

My appointment as Engineer in Charge was made on April 2nd, 1899. Up to the end of the year the only accident which occurred was the breaking of a plunger in No. 3 Jones' underfeed, which was replaced with a new one.

During the year four new 1-in. Jenkins' valves were put on the boilers, with flanges, so that joints could be made without taking down the steam pipe which formerly had to be done. Plungers and sleeves were put in No. 2 pumps. The inside and outside of Engine Room and Boiler Room were painted as well as the house. All ordinary running repairs were made and the plant is working satisfactorily.

Yours respectfully,
W. B. HALL,
Engineer in Charge.

APPENDIX "A."

ACCOUNTANT'S STATEMENT.

CITY ENGINEER'S OFFICE,
December 30th, 1899.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—I attach herewith Statement of Expenditure for the year ending December 31st, 1899, showing details of Contract Work, Material and Labor on General, Special and Local Improvement Work, marked Appendix "A"; also Statement of Expenditure of the Water Works Branch, with details of same to December 31st, 1899, marked Appendix "B," all of which is respectfully submitted.

Yours truly,

WM. McCARTNEY,
Accountant.

For Abstract of Charges see page	ACCOUNTS.	$ c.	$ c.	$ c.
	GENERAL WORK.			
81	Bridges, repairs and maintenance	5,806 40		
82	Culvert cleaning	4,649 28		
83	Engineering and expenses	23,393 09		
83	General purpose	18,710 19		
86	Roadways	23,151 43		
88	Sidewalks	13,957 59		
89	Snow cleaning off sidewalks	2,761 20		
89	Street cleaning	50,862 94		
89	Scavenging	69,090 71		
90	Street watering	21,249 79		
91	Stone and wooden crossings	2,160 81		
91	" " kerbs	294 43		
91	Private drains	14,181 78		
		250,269 64		
	Less am't paid Treas. for p'te drains	14,553 17		
			235,716 47	
	SPECIAL WORKS.			
92	Ashbridge's Bay ditch	165 03		
91	Cribbing Block "D"	25,361 00		
92	Cherry Street bridge sidewalk	187 51		
92	Dredging slips	1,972 86		
92	Eastern Avenue cinder path	265 29		
92	Filling lagoon rear Lakeside Home	750 00		
92	Free bathing	1,359 20		
92	Frederick Street siding	166 60		
92	Island bicycle path	274 86		
92	Island sidewalk (wharf to bridge)	445 51		
93	Level crossings	3,347 23		
93	Levelling Keating's Cut	584 65		
93	Lakeshore Road sidewalk	366 17		
93	Planking Island breakwater	300 66		
93	Rentals	605 00		
93	Rosedale Ravine Drive	388 25		
93	Relaying stone setts, Yonge St	241 96		
94	" Wellington St.	238 22		
94	Reconstruction of track allowances	47,521 22		
95	Sewage disposal	345 00		
95	Station Street asphalt pavement	9,748 86		
95	Sidewalk on breakwater	441 31		
95	Sand pump	4,089 28		
96	Queen Street East culvert	1,055 75		
			100,221 42	
	Carried forward			335,937 89

For Abstract of Charges see page	ACCOUNTS.	$ c.	$ c.	$ c.
	Brought forward			335,937 89
	BRIDGES, GRADINGS, OPENINGS, ETC.			
97	Eastern Avenue bridge	6,626 04		
98	Humber bridge	3,887 62		
97	Queen Street bridge	10,128 38		
98	Queen Street subway	7,796 91		
98	York Street bridge	51 00		
98	Dundas Street bridge track repairs	567 54		
				29,057 49
96	Railway pavements			12,149 04
	Local Improvement Works:			
98	Sewers		8,496 32	
100	Asphalt pavements	261,160 93		
107	Brick "	71,467 73		
107	Macadam "	71,205 65		
112	Cedar block "	34,305 31		
116	Gravel "	3,617 02		
			441,783 64	
123	Brick sidewalks	1,945 84		
123	Concrete sidewalks	32,892 92		
123	Wooden "	46,353 66		
			81,192 42	
				531,472 38
123	Personal and departmental accounts.			36,707 46
				945,324 26

DETAILS.	$ c.	$ c.	$ c.
BRIDGE REPAIRS, ETC.			
Cherry Street.			
5,104 ft. lumber, $78.92; blacksmithing, $78.80	157 72		
Laths, ladder, red and white globes	6 52		
Labor	1,131 40		
		1,295 64	
Winchester Street.			
60 ft. lumber		70	
Keating's Cut.			
Flanged wheels, etc., $48; nails, $3.50	51 50		
Blacksmithing, $26, 2,670 ft. wood, $42.29	68 29		
Labor	294 94		
		414 73	
Brunswick Avenue.			
3,700 ft. lumber	58 50		
Labor	33 34		
		91 84	
Humber Bridge.			
1,173 ft. lumber, $18.60; 300 ft. pine, $8.25	26 85		
Blacksmithing	1 40		
Labor	144 51		
		172 76	
Shaw Street.			
6,646 ft. lumber, $108.73; spikes, $11.40	120 13		
Labor	83 45		
		203 58	
Strachan Avenue.			
5,677 ft. lumber, $86.27; spikes, $14.25	100 52		
Coal oil, 54c.; 1 adze, 60c.	1 14		
Labor	62 38		
		164 04	
Sherbourne Street.			
Screws, etc		8 16	
York Street.			
Labor		35 03	
Huntley Street.			
500 ft. pine, $8.50; 1 cord cedar blocks, $5.10; patterns, $12	25 60		
1,887 lbs. castings, $28.31; .50 toise macadam, $5	33 31		
Carried forward	58 91	2,386 48	

	$ c.	$ c.	$ c.
Brought forward	58 91	2,386 48	
84,783 ft. lumber, $1,305.55; 600 laths, $1.80	1,307 35		
Cartage, $1; dressing and sawing, $7.38	8 38		
Labor	648 46		
		2,023 10	
Glen Road.			
2,056 ft. lumber, $33.92; 54 ft. oak, $3.24	37 16		
Cartage, $2; patterns, $7.25	9 25		
Labor	725 89		
		772 30	
Crawford Street.			
3,246 ft. lumber, $47.59; 25 lbs. nails, 52c.; spikes, $5.70	53 81		
Labor	55 25		
		109 06	
Carlaw Avenue.			
2 brushes $2; 350 lbs. paint, $35	37 00		
Labor	47 00		
		84 00	
Gerrard Street.			
400 lbs. nails, $14; 9,220 ft. lumber, $156.73	170 73		
160 lbs. castings, $2.40; patterns, $2; files, 36c	4 76		
Labor	112 06		
		287 55	
Castle Frank.			
Labor		5 00	
Bridge tools		138 91	
			5,806 40
CULVERT CLEANING.			
344 ft. lumber, $1.72; 10 lbs. rivets, 80c.	2 52		
Galvanized iron, $3.50; bolts, $1.35	4 85		
Labor	4,080 50		
		4,087 87	
HOUSE NUMBERING AND WEED CUTTING.			
625 house numbers, $18.25; 23 signs, $17.75; G. iron, $5	41 00		
200 lbs. white lead, $10.60; 36 scythe stones, $2.16	12 76		
9 scythe blades, $4.50; 2 snathes, 70c.	5 20		
Labor	502 45		
		561 41	
			4,649 28
Carried forward			10,455 68

	$ c.	$ c.	$ c.
Brought forward			10,455 68
ENGINEERING AND EXPENSES.			
Board of horse, $296.51; horseshoeing, $7.05	303 56		
Hire of Paymaster's buggy, $92.50; hack hire, $73	165 50		
Car tickets, $550; stationery, $143.15	693 15		
Postage stamps and cards	190 00		
Subscriptions, $70.18; engineering books, $48.50	118 68		
Veterinary services, $17.25; horses, $130.	147 25		
Typewriting and photo supplies	151 59		
Lithographing, $566; office fittings, $88.80	654 80		
Mounting maps, $12; 1 cabinet, $42.40	54 40		
Messages, $23.07; freight and duty, $10.16	33 23		
Lantern exhibition at City Hall, $10; photos, $12	22 00		
Deputation and travelling expenses	81 05		
Phone service, $42.90; petty cash, $60	102 90		
Buggy and parts, $119.75; cartage, $21	140 75		
Boxes for moving, $69.34; ink stamps, $25	94 34		
Repairs, $35.95; sundries, $58.65	94 60		
Services *re* electric lights and bells	57 80		
Sand paper, paint, putty, etc	20 15		
Official salaries and sundry labor	20,267 34		
			23,393 69
GENERAL PURPOSE.			
Areas.			
Books and rolls	19 25		
Labor	601 00		
		620 25	
Albert Street Sewer.			
4,000 bricks, $28; labor, $9.05		37 05	
Cleaning and Flushing.			
60 ft. lumber, 85c.; 6 prs. boots, $25.68.	26 53		
10 sets extension rings, $28.60; horse keep, $30	58 60		
6 files, 60c.; 1 gal. coal oil, 20c	80		
Labor	2,840 14		
		2,926 07	
Dufferin Street Sewer.			
600 bricks, $45; 28 yds. gravel, $19.72	64 72		
9,002 ft. lumber, $134.39; 50 bbls. cement, $117.50	251 89		
400 ft. pipe, $55.40; junctions, bends, etc., $24.57	79 97		
Carried forward	396 58	3,583 37	33,848 77

	$ c.	$ c.	$ c.
Brought forward	396 58	3,583 37	33,848 77
Coal oil, wick, pails, etc	8 73		
Labor	1,337 72		
		1,743 03	
James Street Sewer.			
6,000 bricks		42 00	
Grading Lee Avenue.			
Labor		158 51	
Lansdowne Avenue Crossing.			
Labor		35 00	
Manholes and Culverts.			
383 ft. 9-in pipe, $53.14; 12 ft. 6-in. pipe, $1.08	54 22		
76 ft. 24-in. pipe, $87.40; castings, $45	132 40		
100¼ bbls. cement, $244.21; 54,350 bricks, $381.89	626 10		
78 yds. sand, $59.46; 17,680 ft. lumber, $261.56	321 02		
Manhole tops and steps, $53.35; 9 culvert traps, $45	98 35		
16 yds. gravel, $12.64; 40 bars iron, $29.31	41 95		
30 gals. coal oil, $4.87; 428 ft. curb, $5.78; horse feed, $5.12	15 77		
May Street	4 20		
Nails, spikes and sundry material	22 12		
Labor	1,753 68		
		3,069 81	
Public Lavatory.			
10 lbs. sand, $2; 3 brooms, $1.05	3 05		
Soap, etc	5 25		
Labor	317 08		
		325 38	
Overcrowding Cars.			
Labor		430 52	
Sewer Repairs.			
21¾ yds. sand, $17.44; Standard sand, 1 bbl., $12.50	29 94		
22 ft. 15-in. pipe, $36; 14 ft. 6 in. of 6-in. pipe, $1.26	37 26		
12 ft. of 9-in. pipe, $2.10; 24 ft. of 18-in. pipe, $15.20; 2 ft. of 12-in., 50c.	17 80		
13,853 ft. lumber, $224.64; 14 yds. gravel, $10.56	235 20		
Carried forward	320 20	9,387 62	33,848 77

	$ c.	$ c.	$ c.
Brought forward	320 20	9,387 62	33,848 77
11,880 bricks, $102.60; 4 culvert traps, $23.55	126 15		
Board of horse, $297.44; rentals, $154	451 44		
2 lbs. castings, $18; 150 ft. fire hose, $157.50	175 50		
2 toise stone, $14.80; 17 pairs boots, $66.88	81 68		
63¼ bbls. cement, $152.56; coal, $5.56	158 12		
Hauling, $23; repairing pump, $3.80	31 80		
Bends, junctions, etc	50 70		
Sundry hardware	38 72		
Customs entry on sand, $1.46; ventilating pipe, $30	31 46		
Horse feed and straw, $18.40; nails, $2.73	21 13		
394 lbs. iron, $9.85; 31 lbs. steel, $3.72	13 57		
Manhole steps and tops	6 32		
Labor	2,790 06		
		4,296 85	
Tools and Miscellaneous.			
5,546 ft. lumber, $101.48; freight and duty, $20.90	122 38		
Tumblers, $1.20; process paper, etc., $241.50	242 70		
Paint, $6.60; coal oil, 74c.; tapes and repairs, $18.75	26 09		
Wire screen, $14.85; 5 gals. boiled oil, $3.75	18 60		
Sharpening tools, 50c.; mounting maps, $49	49 50		
Revising atlas, $166.50; painting rods, $9	175 50		
Patterns, $28.70; furniture, $413.28; 1 drill, $3	444 98		
Photo supplies, $29.14; board of horse, $28	57 14		
G. I. Valleys, $4.48; nails, $7.90; typewriter, $66.25	78 63		
500 copies of Engineers Report, $341.70; castings, $36	377 70		
Ferry fares, $8; plans, $140; rent of office, $10	158 00		
Travelling expenses, $2.95; 23 L. glass, $5.60	8 55		
Ink, $36.70; stamps, $5.25; drawer pulls, $21	62 95		
Boat hire, $6.25; phone service, $35	41 25		
Cement gauge, $23.60; repairs, $9.25	32 85		
Sundry hardware	26 11		
Varnish, stain and sundry material	40 29		
Labor	3,062 50		
		5,025 72	
			18,710 19
Carried forward			52,558 96

	$ c.	$ c.	$ c.
Brought forward			52,558 96
ROADWAYS.			
Macadam.			
6,920 ft. lumber, $87.05; 40 620/2000 tons coal, $172.09	259 14		
564 yds. gravel, $443.39; 157½ toise macadam, $1,600.34	2,043 73		
155 toise stone, $5.47; 8 yds. sand, $6.96	12 43		
125 lbs. nails, $2.33; 936 ft. kerbing, $12.64	14 97		
2,097 lbs. castings, $88.95; brass couplings, $7.02	95 97		
65 lbs. waste, $4.55; 5¼ lbs. packing, $1.84	6 39		
400 lbs. babbitt, $16; teaming, $11	27 00		
19 gals. coal oil, $2.66; 860 lbs. boiler purge, $68.80	71 46		
4 steel plates, $16.56; 45 ft. belting, $26.46	43 02		
Steel screen, $45.50; 653 lbs. steel, $41.15	86 65		
47 gals. oils, $36.80; 26 ft. kerb stone, $13.09	49 89		
2 tension springs, $6; 9 bbls. cement, $21.39	27 39		
46 ft. 6-in. pipe, $5.36; travelling expenses, $4.75	10 11		
Sundry hardware, $5.61; repairs, $1.85	7 46		
110 ft. sprocket chain, $27.50; attachments, $9.49	36 99		
Iron, 68c.; freight, 98c	1 66		
Labor	5,203 29		
	7,997 55		
Less amount paid Treasurer for use of roller	1,089 30		
		6,908 25	
Cedar Block.			
187 cords cedar blocks, $915.45; 2 cords cedar posts, $10	925 45		
135 yds. gravel, $102.66; 3,012 ft. lumber, $36.47	139 13		
100 lbs. nails, $2.08; cedar curb, 32c.; 12 files, $3.60	6 00		
¼ toise macadam, $2.50; 5 lbs. spikes, 14c	2 64		
Labor	2,542 71		
		3,615 93	
Stone and Cobble.			
3 toise macadam, $2.77; 1 bbl. cement, $2.35	5 12		
155 ft. lumber, $1.87; 6 yds. gravel, $4.44	6 31		
Labor	229 70		
		241 13	
Carried forward		10,765 31	52,558 96

	$ c.	$ c.	$ c.
Brought forward		10,765 31	52,558 96
Repairs.			
4,700 bricks, $45.82; 8 ft. circular stone kerb, $6	51 82		
2 cords wood, $5.30; 2 steel plates, $7	12 30		
8 bbls. cement, $19.52; 92 yds. sand, $62.64	82 16		
$8\frac{1365}{2000}$ tons coal, $36.59; 4,145 ft. lumber, $50.27	86 86		
10 gals. varnish, $20; 128 yds. gravel, $129	149 00		
Thermometers, $16.50; 226 lbs. nails, $7.68	24 18		
Moving poles, $22.53; repairing wheel, $4.50	27 03		
Sundry material	22 17		
Labor	5,972 91		
Deduction for overtime on Dunn Avenue refunded	105 00		
	6,533 43		
Credit, cost of Engineer's buggy	91 75		
		6,441 68	
Tools and Miscellaneous.			
2 cutter seats, $19.50; repairs, $40.90	60 40		
100 ft. sprocket chain, $23.84; wood, $8.26	32 10		
Carriage parts, $28.03; photo supplies, $15.54	43 57		
9 lbs. packing, $5.34; drawing tools, $12.50	17 84		
Tyres, $13; 8 circular saws, $23.20	36 20		
Phone service, $25; $4\frac{1}{2}$ doz. files, $10.20	35 20		
981 lbs. castings, $20.28; 12 tapes, $19.68	39 96		
7,347 ft. lumber, $84.83; 252 lbs. steel, $45.71	130 54		
3 tons coal, $10.50; moving safes, $8.45	18 95		
Levels, screws, rails, paint and sundry material	79 87		
Labor	170 48		
		665 11	
Street Intersections.			
2 bbls. cement, $4.70; 3 yds. sand, $2.10	6 80		
2,500 bricks, $36.00; 24 yds. gravel, $17.76	53 76		
33 cords cedar blocks	168 30		
Labor	45 61		
		274 47	
Track Repairs.			
125 bbls. cement, $330.12; 40 ft. pipe, $4.13	334 25		
$65\frac{1}{2}$ yds. sand, $50.61; 6 yds. gravel, $5.06	55 67		
1,850 bricks, $28.16; $2\frac{1}{2}$ toise macadam, $25	53 16		
Carried forward	443 08	18,146 57	52,558 96

	$ c.	$ c.	$ c.
Brought forward	443 08	18,146 57	52,558 96
Joints, bends, coal oil, etc	2 70		
Labor	1,687 34		
		2,133 12	
Asphalt Repairs.			
15½ ft. stone kerb, $26.05; 6 yds. sand, $5.22	31 27		
Repairs	2,155 52		
Labor	435 20		
		2,621 99	
Culvert, Lake Shore Road.			
3,968 ft. lumber, $66.61; cartage, $4.48	71 09		
Labor	53 66		
		124 75	
Grading Garden Avenue.			
Labor		125 00	
			23,151 43
SIDEWALKS.			
211,477 ft. lumber, $2,641.11; 10,068 lbs. nails, $192.64	2,833 75		
Refund by Treasurer, $20.00; Rent of yard, $42.00	62 00		
Repairs to sundry concrete walks	509 27		
Hauling, $5.00; cor. iron, $83.60; saws, $68.00	156 60		
Rent of Phones, $80.00; 7 pulleys, $8.20.	88 20		
Asphalt roofing, $65.70; leather belts, $12.05	77 75		
3 globe valves, $9.10; $9\frac{720}{2000}$ tons of coal, $31.57	40 67		
5,582 ft. cedar kerb, $87.67; ferry tickets, $15.00	102 67		
6 yds. gravel, $5.70; 680 lbs. jelly stone, $20.40	26 10		
90 ft. stone kerb, $34.57; 1,000 bricks, $7.	41 57		
17 bbls. cement, $34.93; spikes, $4.29	39 22		
Sundry hardware	23 44		
Hubs, spokes, wheels and sundry material.	20 94		
Labor	12,107 98		
	16,130 16		
Less amount paid Treasurer for sidewalk extensions and scrap	2,172 57		
		13,957 59	
			13,957 59
Carried forward			89,667 98

	$ c.	$ c.	$ c.
Brought forward			89,667 98
SNOW CLEANING OFF SIDEWALKS.			
20 yds sand, $12.70; books, $27.20; shovels $5.00	44 90		
Snow cards, $5,50; tape lines, $10.50	16 00		
Labor	2,690 30		
		2,761 20	
STREET CLEANING.			2,761 20
Horse feed and straw, $1,591.92; 8 horses $982.50	2,574 42		
23 gals. boiled oil, $11.25; harness leather $50.02	61 27		
2,800 bolts, $16.89; harness, 17.54	34 43		
Thread, 6.18; brass fibre, $45.00	51 18		
202 lbs. babbitt, $27.22; 920 lbs. nails $15.31	42 53		
Brass castings, $24.15; brushes, 9.15	33 30		
510 ft. hose, 238.00; G. I. tubes, $24.00.	262 00		
1 ventilating fan, $33.50; rattan, $61.20.	94 70		
1,449 lbs. castings, 21.63; 64 lbs. Japan, 6.50	28 13		
276 ft. basswood, $11.34; cart spokes, $22.00	34 34		
Duck suits, $125.00; 10 prs. boots, $31.25	156 25		
Phone service, $73.50; 80 yds. sand, $69.60	143 10		
3,192 lbs. iron, 80.99; 55 gals. coal oil $8.78	89 77		
1,239 lbs. steel, $54.31; 2,060 lbs. wire $190.55	244 86		
8,690 ft. lumber, $43.56; electric power at stables, $9.58	53 14		
11 cords wood, $43.25; veterinary services $74.25	117 50		
$30\frac{520}{2000}$ tons coal, $114.95; engine oil, $12.18	127 13		
Screws, nuts, fittings and sundry material	61 92		
Sundry hardware, $80.26; repairs, $23.40	103 66		
Labor	46,549 21		
		50,862 94	
SCAVENGING.			50,862.94
2,417 ft. lumber, $28.21; $10\frac{1713}{2000}$ tons coal, $50.99	79 20		
7 cords wood, $30.30; 590 lbs. nails, $25.34	55 64		
9,469½ lbs. iron, $259.40; Axle Grease, $20.80	280 20		
207 yds. duck, $136.82; power at stables, $19,28	156 10		
Veterinary services, $88.00; horse feed, $5,370.14	5,458 14		
Horses, $656.25; harness trimmings etc., $62.36	718 61		
Carried forward	6,747 89		143,292 12

	$ c.	$ c.	$ c.
Brought forward	6,747 89		143,292 12
300 printed headings, $6.50; asphalt and tar paper, $32.25	38 75		
22 gals. boiled oil, $16.65; phone services, $14.50	31 15		
Spikes, $22.00: Brushes, $13.18	35 18		
White lead, lime, bolts, sundry material	75 42		
Labor	62,212 69		
	69,141 08		
Less amount paid Treasurer for Board of Horse	533 87		
		68,607 21	
Island Scavenging.			
Ferry fares, $28.40; lime and buckets, $9.00	37 40		
Labor	446 10		
		483 50	
			69,090 71
STREET WATERING.			
Phone service, $85.50; harness trimmings, $103.41	188 91		
1,067 lbs. nails, $46.21; horse feed, $4,018.58	4,064 79		
Repairs, $25.70; shingles, $10.50	36 20		
569½ lbs. leather, $170.63; 751 lbs. steel, $26.29	196 92		
50 lbs. curled hair, $17; 11,239 lbs. iron, $283.17	300 17		
498½ ft. hose, $255.50; veterinary services, $102.50	358 00		
Street sprinkling	2,661 63		
12 prs. hubs, $21; 684 lbs. castings, $13.37	34 37		
Electric power at stables, $230.43; 5 horses, $656.25	886 68		
2,442 ft. lumber, $62.69; harness, etc., $27	89 69		
$15\frac{920}{2000}$ tons coal, $64.60; 338 lbs. paint, $55.40	129 00		
186 brushes, $38.44; 3 cords wood, $12.65	51 09		
72 expansion rings, $10.08; 21 rasps, $10.35	20 43		
Paint and white lead, $38.95; carriage bolts and spokes, $41.90	80 85		
Couplings, $14.04; axle grease, $13.22	27 26		
Sundry fittings and material	80 20		
Labor	12,052 60		
			21,249 79
Carried forward			233,632 62

	$ c.	$ c.	$ c.
Brought forward			233,632 62
STONE AND WOODEN CROSSINGS.			
58,036 ft. lumber, $678.61 ; 24 lbs. nails, $4.79	683 40		
1,045 lbs. spikes, $27.60 ; 42 yds. gravel, $34.34	61 94		
2 toise macadam, $20 ; 10½ yds. sand, $7.67	27 67		
39½ bbls. cement, $103.23 ; 2¾ cords cedar blocks, $14.03	117 26		
Hack hire, $4.50 ; coal oil, 18c	4 68		
Labor	1,265 86		
			2,160 81
STONE AND WOODEN KERBS.			
3,256 ft. lumber, $41.36; 1 bbl. cement, $2.35	43 71		
Repairs, $6.50 ; rentals, $28	34 50		
P. knives, $5.28; 148 ft. oak, $7.40	12 68		
Sundry materials	9 26		
Labor	194 28		
			294 43
PRIVATE DRAINS.			
7,141 ft. lumber, $79.34 ; 17 lamps, $6.60	86 94		
1,213½ bbls. cement, $308.86 ; 142 gals. coal oil, $25.14	334 20		
16,901 ft. 6-in. pipe, $1,513.87 ; 1,528 ft. 9-in. pipe, $225.50	1,739 37		
16 ft. 4-in. pipe, $1.56 ; 14 9-in. bends, $9.65	11 21		
53 ft. 6-in. bends, $13.95 ; junctions, elbows, etc., $8.80	22 75		
Asphalt repairs, $75.43 ; sundry private drains, $74.36	149 79		
2 culvert traps, $10 ; pails and wheel-barrows, $17.45	27 45		
Lowering main, 34 Park Road	19 99		
Treasurer's refund	1,128 56		
Lamps, wick, globes and sundry material	17 65		
Labor	10,643 87		
			14,181 78
			250,269 64
Less amount paid Treas. for sundry drains (Amount at credit of p. drain acc't $371.39)			14,553 17
			235,716 47
SPECIAL WORKS.			
Cribbing Block "D."			
Dredging, $60 ; 1 pair boots, $3	63 00		
Inspection	648 00		
Contract	24,650 00		
			25,361 00
Carried forward			261,077 47

	$ c.	$ c.	$ c.
Brought forward			261,077 47
Cherry Street Bridge Sidewalk.			
11,889 ft. lumber, $142.90 ; 400 lbs. nails, $7.32	150 22		
Labor	37 29		
			187 51
Dredging Slips.			
8,500 yds. dredging	660 00		
Contract	1,209 36		
Labor	103 50		
			1,972 86
Ashbridge's Bay Ditch.			
Labor			165 03
Eastern Avenue Cinder Path.			
443 ft. lumber	5 29		
Labor	260 00		
			265 29
Filling Lagoon Rear of Lakeside Home.			
Contract			750 00
Free Bathing.			
9,565 ft. lumber, $113.73 ; nails, $8.81	122 54		
1 cord posts, $6.84 ; rope, $4.23	11 07		
Wharfage and dock services	90 00		
Inspection of scow	10 00		
Hire of row-boat, $11 ; towing, $7.50	18 50		
Use of steamer and ferry	711 00		
Pails, axes, etc	3 33		
Labor	392 76		
			1,355 20
Frederick Street Siding.			
Rental			166 60
Island Bicycle Path.			
21,444 ft. lumber, $260.50 ; nails, $11.90.	272 40		
¼ cord posts	2 46		
			274 86
Island Sidewalk (From Wharf to Bridge.)			
30,869 ft. lumber, $373.53 ; 700 lbs. nails, $12.81	386 34		
Ferry fares	8 00		
Labor	51 17		
			445 51
Carried forward			266,664 33

	$ c.	$ c.	$ c.
Brought forward			266,664 33
LEVEL CROSSINGS.			
Grand Trunk Railway.			
Pape Avenue	376 44		
Jones Avenue	380 50		
Logan Avenue	387 39		
Bloor Street	287 69		
		1,432 02	
Canadian Pacific Railway.			
Avenue Road	514 91		
Bathurst Street	341 87		
Dufferin Street	344 13		
		1,200 91	
Dunn and Dowling Avenues		714 30	
			3,347 23
LEVELLING AT KEATING'S CUT.			
280 ft. lumber	3 33		
Labor	581 32		
			584 65
LAKESHORE ROAD SIDEWALK.			
Lumber, $281.24; nails, $11	292 24		
Labor	73 93		
			366 17
PLANKING ISLAND BREAKWATER.			
Ferry fares	2 00		
19,200 ft. lumber, $233.66; 70 lbs. nails, $12.81	246 47		
Labor	42 19		
		290 66	
PLANKING QUEEN'S WHARF.			
Towing scow		10 00	
			300 66
RENTALS.			
Hamilton wharf			605 00
ROSEDALE RAVINE DRIVE.			
Labor			388 25
RELAYING STONE SETTS.			
Yonge Street, King to Front.			
14 gals. coal oil	1 96		
Labor	240 00		
			241 96
Carried forward			272,498 25

	$ c.	$ c.	$ c.
Brought forward			272,498 25
Wellington Street, Bay to York.			
Labor			238 22
RECONSTRUCTION OF TRACK ALLOWANCE.			
Queen Street, Bathurst to Niagara.			
Contract		413 22	
Queen Street, Niagara to Gladstone.			
½ yard sand	35		
Contract	3,254 68		
Labor	84 52		
		3,339 55	
Queen Street, Simcoe to Sherbourne.			
200 ft. hose, $58.56; 63 picks, $58.56	117 12		
7.75 toise macadam, $77.50; 10 sledges, $15.90	93 40		
602½ bbls. cement, $1,453.22; 20 crow-bars, $37	1,490 22		
Repairs (tools), $101.33; 939 yds. sand, $563.64	664 97		
Scoria blocks (353,737)	10,341 26		
12 wheelbarrows, $12; 11 pails, $17.90	29 90		
Teaming, $295.70; 11 steel wedges, $48.12	343 82		
Use of Wells' lights	33 35		
25 yds. duck, $22.25; 2 track gullies, $9	31 25		
Tools and sundry material	123 71		
Labor	3,623 44		
Contract	6,225 81		
		23,118 25	
Queen Street, Yonge to Bathurst.			
245 yds. gravel	220 50		
Contract	1,929 56		
		2,150 06	
Queen Street, Yonge to River.			
2,000 bricks, $29; 4 yds. sand, $3.48	32 48		
2 bbls. cement	4 70		
Labor	57 84		
		95 02	
Yonge Street, Grenville to Bloor.			
Contract	7,405 37		
Labor	91 85		
		7,497 22	
Carried forward		36,613 32	272,736 47

	$ c.	$ c.	$ c.
Brought forward		36,613 32	272,736 47
King Street, Sherbourne to River.			
Contract	5,255 55		
Labor	107 86		
		5,363 41	
Yonge Street, Davenport to C.P.R.			
Contract	3,019 38		
Labor	76 01		
		3,095 39	
King Street, Simcoe to Spadina.			
Contract		843 53	
Winchester Street, Parliament to Sumach.			
Contract		25 35	
Dundas Street, Queen to Arthur.			
Contract		546 53	
Yonge Street, King to Hayter.			
Contract		1,033 69	
			47,521 22
SEWAGE DISPOSAL.			
Deputation expenses to sundry American cities			345 00
STATION STREET ASPHALT PAVEMENT.			
2,000 bricks, $14; 7 bbls. cement, $16.45.	30 45		
70 ft. 9-in. pipe, $10.50; 4 yds. sand, $3.48	13 98		
Junctions, bends, etc.	3 77		
Labor, $134.20; inspection, $135	269 20		
Contract	9,431 46		
			9,748 86
SIDEWALK ON BREAKWATER.			
Hire of scow, $40; ferry tickets, $7	47 00		
23,820 ft. lumber, $285.22; nails, 92c	286 14		
400 lbs. spikes	9 96		
Labor	98 21		
			441 31
SAND PUMP.			
$10\frac{645}{2000}$ tons coal, $36.59; oils, $155.74	192 33		
Boilermaker's time	46 80		
4 cords wood, $15.93; $36\frac{1}{4}$ lbs. packing $6.53.	22 46		
Repairs, $523.95; paint, $35.40	559 35		
Carried forward	820 94		330,792 86

	$ c.	$ c.	$ c.
Brought forward	820 94		330,792 86
Meat, groceries, ice and milk for dredge.	375 17		
6 sleeves, $129.00 ; globe valve, $7.50	136 50		
13 lbs. rubber soling, $6.50 ; 2 gals. varnish, $6.40	12 90		
Government inspection	41 24		
Rubber goods, $20.28 ; brass fittings, $43.90	64 18		
Sundry fittings and tools	47 41		
6 life preservers, $7.50 ; rope, $28.31 ; fog bell, $18.00	53 81		
Labor	2,537 13		
			4,089 28
QUEEN STREET EAST CULVERT.			
138 bbls. cement, $396.27 ; 12,500 bricks, $93.75	490 02		
36 ft. 9-in. pipe, $5.40 ; 15 gals. coal oil, $2.10	7 50		
2 bends	1 50		
Labor	656 73		
	1,155 75		
Less amount paid to Treasurer by McLean Howard	100 00		
		1,055 75	
			1,055 75
			335,937 89
RAILWAY PAVEMENTS.			
Rosedale Loop Line.			
34 yds. gravel, $24.76 ; Sand, $12.18	36 94		
123 ft. lumber, $1.46 ; 12,000 bricks $174	175 46		
13½ tons macadam, $61.28 ; 10½ cords posts $46.20	107 48		
10 bbl. cement	37 60		
Contract	325 67		
Labor	323 33		
		1,006 48	
Bathurst Street, Queen to Bloor.			
Contract		100 00	
King Street, Sherbourne to Simcoe.			
Contract		3,802 49	
College Street, Yonge to McCaul.			
Contract		1,555 81	
Carried forward		6,464 78	

	$ c.	$ c.	$ c.
Brought forward		6,464 78	335,937 89
York Street, Front to Queen.			
Contract		1,167 35	
Dovercourt Road, College to Bloor.			
Contract		1,633 10	
McCaul Street, Queen to College.			
Contract		2,883 81	
			12,149 04
BRIDGES, GRADINGS, ETC.			
Queen Street Bridge Over Don.			
1,389 ft. pine wood, $22.13 ; use of capstan, $17.80	39 93		
Plumbing work, $9.14 ; use of scow, etc., $200	209 14		
30 yds. stone, $37.94 ; removing gates, $75	112 94		
38,407 ft. lumber, $727.52 ; 3½ cords wood, $16.50	744 02		
1,340 lbs. nails, $37.96 ; 300 bbls. cement, $797.72	835 68		
Freight, $193.20 ; 1½ toise macadam, $15.	208 20		
1 ton coal, $5.75 ; blacksmithing, $52.31.	58 06		
Cartage, $13.95 ; resawing, $12.90	26 85		
Travelling expenses	63 00		
3 prs. boots, $12.18 ; 8 cords posts, $16.01	28 19		
Repairs, $7.95 ; insurance, $50	57 95		
Oils, lanterns, globes and sundry material	12 26		
Contract	4,000 00		
Inspection, $235.50 ; labor, $3,496.66	3,732 16		
		10,128 38	
Eastern Avenue Bridge.			
1,241 ft. pine wood, $20.68 ; 220 lbs. nails, $5.80	26 48		
1,525 ft. lumber, $25.34 ; 8 bbls. cement, $20.72	46 06		
Use of chain, etc.	8 75		
Piles, cartage, etc	11 65		
Contract	6,402 79		
Inspection, $379.61 ; labor, $202.02	581 63		
	7,077 36		
Less amount paid Treasurer for iron	451 32		
		6,626 04	
Carried forward		16,754 42	348,086 93

	$ c.	$ c.	$ c.
Brought forward		16,754 42	348,086 93
Humber River Bridge.			
Contract	3,571 20		
Inspection	303 00		
Labor	13 42		
		3,887 62	
Dundas Street Bridge Track Repairs.			
18 bbls. cement, $46.62 ; coal oil, 53c	47 15		
Labor	520 39		
		567 54	
York Street Bridge.			
28 bbls. pitch (C.P.R.)		51 09	
Queen Street Subway.			
Freight on bricks	13 40		
Altering and lining tracks	114 12		
Corrugated iron shelters	320 00		
500 bricks	6 50		
Contract	6,789 10		
Labor	553 79		
		7,796 91	
			29,057 49
LOCAL IMPROVEMENT SEWERS.			
Amelia Street, Sumach to 180 ft. Easterly.			
585 ft. lumber, $6.24; 5 bbls. cement, $11.75	17 99		
194 ft. of 12-in. pipe, $48.50 ; 8 ft. 18-in. pipe, $2.40	50 90		
7 junctions, $6.25; 400 bricks, $2.80	9 05		
Bends and coal oil, etc	80		
Labor	208 09		
		286 83	
Bernard Avenue, Bedford Road to 380 feet East.			
380 ft. of 12-in. pipe, $66.40 ; 33 junctions, $23.90	90 30		
2,175 bricks, $15.31 ; 29½ bbls. cement, $69.32	84 63		
16 yds. gravel, $10.84 ; 8 9-in. bends, $3.20	14 04		
274 ft. of 6-in. pipe, $19.18 ; 42 ft. of 9-in. pipe, $5.25	24 43		
Sand, coal oil, etc	16 86		
Labor	236 42		
		466 68	
Carried forward		753 51	377,144 42

	$ c.	$ c.	$ c.
Brought forward	.....	753 51	377,144 42
Dupont Street, Huron to Howland.			
Labor	38 73		
Inspection	106 56		
Contract	1,945 20		
		2,090 49	
Dupont Street, Davenport to St. George.			
6½ bbls. cement, $16.83; 2 culvert traps, $10	26 83		
42 ft. of 6-in. pipe, $3.78; 250 ft. of 12-in. pipe, $62.50	66 28		
Bends, $5; 21 junctions, $21	26 00		
342 ft. lumber, $3.43; 2,500 bricks, $18.75	22 18		
Sharpening tools, $5.12; sand, $2.80	7 92		
Gaskets, stoppers, etc.	5 57		
Labor	280 58		
		435 36	
Fisher Street, Dufferin to Sheridan.			
Labor	48 31		
Contract	432 29		
		480 60	
Golden Avenue, Dundas to 440 ft. North.			
Labor	48 29		
Contract	412 80		
		461 09	
Hickory Street, St. Patrick to lane.			
700 bricks, $5.25; 214 ft. of 12-in. pipe, $53.50	58 75		
4 bbls. cement, $10.36; 6 junctions, $6.00	16 36		
410 lbs. castings, $6.15; 1 cul trap, $5.00	11 15		
Coal oil, stoppers, manhole steps, etc.	4 60		
Labor	162 37		
		253 23	
Orford Avenue, Parliament to Clara.			
3,000 bricks, $21.00; 19 junctions, $19	40 00		
1,008 ft. lumber, $15.52; 8 bbls. cement, $18.80	34 32		
40 ft. of 9-in pipe, $6.00; 362 ft. 12-in pipe, $90.50	96 50		
Gravel, coal oil, manhole steps, etc.	7 91		
Labor	398 78		
		577 51	
Queen Street, Knox, to 500 ft. East.			
Labor	46 62		
Contract	619 05		
		665 67	
Carried forward	.....	5,717 46	377,144 42

	$ c.	$ c.	$ c.
Brought forward	.....	5,717 46	377,144 42
Spadina Avenue, Dupont to North City Toronto.			
58 ft. of 9-in. pipe, $8.70 ; 23,150 bricks, $173.63	182 33		
2 cul traps, $10 ; 33 bbls. cement $85.47	95 47		
10 yds. sand, $7 ; sharpening tools $6.50	13 50		
Bends, pails, manhole steps, etc	4 62		
Labor	539 35		
		835 27	
Van Horne Street, Dufferin to Dovercourt.			
Labor	8.10		
Inspection	156 51		
Contract	1,778 98		
		1,943 59	
			8,496 32
LOCAL IMPROVEMENT PAVEMENTS 1899—ASPHALT.			
Admiral Rd., Lowther to Bernard.			
1,360 ft. lumber	16 55		
180 bricks, $1.35 ; 8 bbls. cement, $20.72	22 07		
6,500 lbs. castings	97 50		
Pipe, bends, sand, nails, etc	15 55		
Contract work	6,518 40		
Inspection, $104.50 ; labor, 170.43	274 93		
		6,945 00	
Adelaide Street, Church to Yonge.			
Contract work	.....	1,929 66	
Albert Street, Yonge to James.			
2,500 bricks, $18.75 ; 4 bbls. cement, $10.36	29 11		
3,960 lbs. castings, $59.40 ; 1 culvert trap, $5.00	64 40		
Pipe, sand	6 48		
Concrete walk	72 90		
Contract work	3,443 50		
Inspection $48.00 ; labor, $73.71	121 71		
		3,738 10	
Bernard Avenue, Avenue Rd. to Bedford.			
5,000 bricks, $37.50 ; 12¾ bbls cement, $33.03	70 53		
5,070 lbs castings	76 05		
Pipes, bends, sand, etc	19 17		
Contract work	4,933 52		
Inspection, $73.50 ; labor, $144.90	218 40		
		5,317 67	
Carried forward	.....	17,930 43	385,640 74

	$ c.	$ c.	$ c.
Brought forward	.....	17,930 43	377,144 42
Bloor Street, Avenue Rd. to Walmer Rd.			
534 ft. lumber, $6.45 ; nails, $1,04	7 49		
12,350 bricks, $92.62 ; 30¼ bbls. cement, $80.19	172 81		
1 manhole top, $8.10 ; culvert traps, $10 ; gully tops, $119.70	137 80		
5,130 lbs. castings, $76.95 ; 1 6-in. p. trap, $1.50	78 45		
Repairing concrete walk	25 74		
Bends, pipe, sand, coal oil, etc	49 20		
Contract work	5,950 00		
Inspection, $125.50 ; labor, $347.28	472 78		
		6,894 27	
Brunswick Avenue, Sussex to Bloor.			
1,450 bricks, $10.87 ; 4½ bbls. cement, $11.55	22 42		
2 culvert traps, $10 ; manhole tops, $32.40 ; 4 culvert tops, $31.50	73 90		
Pipe, sand and bends	7 75		
Contract work	4,412 10		
Inspection, $74.50 ; labor, $121.66	196 16		
		4,712 33	
Bedford Road, Lowther to Bernard.			
2,800 bricks, $20.99 ; 10 bbls. cement, $23.50	44 49		
1½ cords blocks, $7.65 ; 8 yds. sand, $5.60	13 25		
Pipe, bends, R. globes, etc	13 78		
Contract work	6,380 30		
Inspection, $93 ; labor, $174.21	267 21		
		6,719 03	
Bleecker Street, Carlton to Wellesley.			
Contract work	.....	1,630 20	
Carlton Street, Sherbourne to Parliament.			
1,082½ ft. lumber, $13.17 ; 33 2-in. kerb, $4.48	17 65		
1 cord blocks, $5.10 ; 50 lbs. nails, 92c. ; .38 toise macadam, $3.80	9 82		
3,000 bricks, $22.50 ; 150 bbls. cement, $38.80	61 30		
1,283 yds. sod, $44.91 ; 150 ft. hose, $14.25	59 16		
4,595 lbs. castings, $68.93 ; sand and pipe, $16.86	85 79		
Repairing concrete walk	14 50		
Contract work	11,210 90		
Inspection, $108.50 ; labor, $324.98	433 48		
		11,892 60	
Carried forward	.....	49,778 86	377,144 42

	$ c.	$ c.	$ c.
Brought forward		49,778 86	377,144 42
Carlton Street, Yonge to Jarvis.			
Contract work		147 09	
Classic Avenue, Spadina to Huron.			
512 ft. lumber, $6.15; 2,910 lbs. castings, $43.65	49 80		
650 bricks, $4.88; 3 bbls. cement, $7.05	11 93		
Bends, sand, pipe, etc	5 22		
Contract work	2,826 49		
Inspection, $81; labor, $77.49	158 49		
		3,051 93	
Close Avenue, King to Queen.			
602 ft. lumber, $7.31; 5,900 lbs. castings, $88.50	95 81		
5,500 bricks, $10.87; 5½ bbls. cement, $14.25	25.12		
Nails, coal oil, sand, etc	3 78		
Contract work	6,128 28		
Inspection, $98.50; labor, $102.97	201 47		
		6,454 46	
Crawford Street, Queen Street to the bridge.			
871 ft. lumber, $10.59; 37 lbs. nails, 77c.	11 36		
5,135 bricks, $38.52; 15 bbls. cement, $38.85	77 37		
9,620 lbs. castings, $144.30; 8⅓ yds. sand, $4.20	148 50		
Bends, pipe, etc	20 34		
Contract work	8,726 80		
Inspection, $90.50; labor, $270.60	361 10		
		9,345 47	
Churchill Avenue, Dovercourt to 715 ft. east.			
688 ft. lumber, $8.34; 4,510 lbs. castings, $67.65	75 99		
1,850 bricks, $13.87; 5 bbls. cement, $12.95	26 82		
Nails, pipe, sand, bends, etc	7 34		
Contract work	4,079 68		
Inspection, $54.50; labor, $92.99	147 49		
		4,337 32	
Cecil Street, Spadina to Beverley.			
Contract work		1,440 72	
Carlton Street, Jarvis to Sherbourne.			
Contract work		1,433 11	
Carried forward		75,988 96	377,144 42

	$ c.	$ c.	$ c.
Brought forward	.....	75,988 96	377,144 42
Czar Street, Yonge to North.			
Contract work	.....	671 85	
Devonshire Place, Hoskin to Bloor.			
Contract work	.....	1,666 65	
Earl Street, Sherbourne to West end.			
Contract work	.....	583 42	
Front Street, Jarvis to George.			
1,000 bricks, $7.50; 1,710 lbs. castings, $25.65	33 15		
1 culvert trap, $5; 4 bbls. cement, $10.36; 2 yds. sand, $1.74	17 10		
Contract work	800 00		
Inspection, $55; labor, 95.66	150 66		
		2,000 91	
Front Street, York to Bay.			
43 bbls. cement, $109.21; 5,500 bricks, $41.25	150 46		
6 manhole steps, 96c.; 2 culvert traps, $10;	10 96		
50 toise macadam, $5; 12 yds. gravel, $8.88; 6 yds. sand, $5.22	19 10		
7,640 lbs. castings	114 60		
Brick bats, pipes and coal oil	15 88		
Moving poles	19 85		
Contract work	10,907 21		
Inspection, $106.00; labor 312.31	418 31		
		11,656 37	
Gifford Street, Spruce to Carlton.			
9 bbls. cement, $23.31; 1,000 bricks, $7.50	30 81		
128 ft. lumber, $1.55; 5 lbs. nails, 9c.	1 64		
10 manhole steps, $1.60; 4 yds. sand, $3.48	5 08		
2,750 lbs. castings	41 25		
Contract work	2,228 25		
Inspection, $34; labor, $84.52	118 52		
		2,425 55	
Hoskin Avenue, St. George to Queen's Park.			
Contract work	.....	1,857 78	
Carried forward	.....	96,851 49	377,144 42

	$ c.	$ c.	$ c.
Brought forward		96,851 49	377,144 42
Huron Street, Bloor to Niagara.			
1,400 bricks, $18; 12 bbls. cement, $31.08	49 08		
6,220 lbs. castings, $96.30; 7¼ yds. sand, $5.07	101 37		
Pipe, bends, etc	20 15		
Contract work	5,577 70		
Inspection $73; labor, $174.36	247 36		
		5,995 66	
James Street, Queen to Albert.			
2,400 lbs. castings, $36; 4 bbls. cement, $9.40	45 40		
2 culvert traps, $10; 1 street Y gully, $25.50	35 50		
Pipe, bends and sand	15 28		
Contract work	4,594 04		
Inspection, $72; labor, $93.83	165 83		
		4,856 05	
King Street, Simcoe to Spadina.			
9,125 bricks, $68.44; 26¼ bbls. cement, $67.99	136 43		
5,700 lbs. castings, $85.50; 8 culvert traps, $40	125 50		
Pipe, junctions, bends, etc	79 54		
Inspection, $46.50; labor, $539.80	586 30		
		927 77	
Lakeview Avenue, Dundas to Churchill.			
6,480 lbs. castings, $97.20; 1,776 ft. lumber, $21.61	118 81		
2,850 bricks, $21.37; 10½ bbls. cement, $27.19	48 56		
1,563 yds. sod, $54.70; 75 lbs. nails, $1.56	56 26		
Pipe, sand, bends, etc	18 74		
Contract work	5,342 49		
Inspection, $106.50; labor, $249.57	356 07		
		5,940 93	
Lane South of Front Street, Scott Street to East End.			
4 bbls. cement, $10.36; 52 ft. pipe, $14.16; junctions, $1.50	26 02		
Contract work	2,477 10		
Inspection, $61.50; labor, $36.97	98 47		
		2,601 59	
Lane in rear of Canada Permanent Bldg.			
Contract work		100 66	
Carried forward		117,274 15	377,144 42

	$ c.	$ c.	$ c.
Brought forward		117,274 15	377,144 42
Markham Street, College to Harbord.			
5,625 bricks, $42.19; 21½ bbls. cement, $55.68	97 87		
9,150 lbs. castings, $134.70; 8 manhole steps, $1.28	135 98		
Pipe, bends, sand, etc	24 62		
Contract work	11,305 00		
Inspection, $154.50; labor $257.18	411 68		
		11,975 15	
Madison Avenue, Bloor to Dupont.			
10,300 bricks, $77.25; 29 bbls. cement, $76.49	153 74		
20,530 lbs. castings, $307.95; 4 culvert traps, $20	327 95		
160 ft. pipe, $24.20; 1 manhole top, $8.10	32 30		
Bends, sand, coal oil	13 69		
Contract work	18,700 00		
Inspection, $174; labor, $423.92	597 92		
		19,825 60	
Marion Street, Lansdowne to O'Hara.			
2,820 lbs. castings, $42.30; 1,320 ft. lumber, $16.04	58 34		
250 bricks, $1.88; 1½ bbls. cement, $3.89; 100 lbs. nails, $2.08	7 85		
Sand, pipe, bends	1 70		
Contract, work	2,908 63		
Inspection, $54.50; labor, $62.23	116 73		
		3,093 25	
Major Street, College to Bloor.			
15,910 lbs. castings, $238.65; 7,750 bricks, $58.12	296 77		
29 bbls. cement, $75.11; 1 culvert trap, $5	80 11		
150 ft. hose, $14.25; 14 yds. sand, $9.80	24 05		
Pipe, bends, coal oil, etc	15 32		
Contract work	20,643 85		
Inspection, $192; labor, $442.13	634 13		
		21,694 23	
Munn's Lane, Wellington to 218 ft. north.			
Contract work		149 17	
Prince Arthur Avenue, Huron to St. George.			
2,250 lbs. castings, $31.20; 194 ft. kerb, $135.80	167 00		
600 bricks, $4.50; 500 yds. sod, $17.50; 2 bbls. cement, $5.18	27 18		
Sand, pipe, bends, etc	2 91		
Carried forward	197 09	174,011 55	377,144 42

	$ c.	$ c.	$ c.
Brought forward	197 09	174,011 55	377,144 42
Contract work	1,769 34		
Inspection, $76.50; labor, $100.10	176 60		
		2,143 03	
Queen Street, Bathurst to Niagara.			
1,680 lbs, castings, $25.20; 980 bricks, $7.30	32 50		
2½ bbls. cement, $5.88; 1 street Y gully, $25.50	31 38		
1,350 ft. lumber, $16.46; nails, $2.08	18 54		
Pipe, bends, sand, etc	4 57		
Contract work	13,835 54		
Inspection, $203; labor, $173.28	376 28		
		14,298 81	
Queen Street, Yonge to River.			
Contract work		10,948 50	
Queen Street, Yonge to John.			
11,400 bricks, $83; 34 bbls. cement, $80.38; 4 culvert traps, $20	183 38		
17,040 lbs. castings, $255.60; .51 toise macadam, $5.10	260 70		
1,314 ft. pipe, $59.11; 1,067 ft. kerb, $14.40; 200 lbs. nails, $4.16	77 67		
½ cord blocks, $2.55; 4 pounders, $7; 14¾ yds. sand, $12.02	21 57		
Manhole steps, rope, junctions, etc	19 68		
Contract work	27,158 46		
Inspection, $300; labor, $657,26	957 26		
		28,678 72	
Spruce Street, Parliament to Sumach.			
25 bbls. cement, $64.75; 5,500 bricks, $41.25	106 00		
7,270 lbs. castings, $109.05; 1,122 ft. lumber, $14.53	123 58		
3;797 yds. sod, $132.90; 300 ft. kerb, $4.05; nails, 64c	137 59		
11 yds. sand, $10.44; 1 culvert trap, $5	15 44		
Pipe, manhole steps, spades, etc	18 92		
Contract work	7,840 60		
Inspection, $74; labor, $380.77	454 77		
		8,696 99	
Spadina Avenue, Knox College to Bloor.			
8,800 lbs. castings, $132; 480 ft. lumber, $5.87	137 87		
6,115 bricks, $45.82; 22 bbls. cement, $56.98	102 80		
Moving poles	11 00		
Pipe, bends, sand, etc	37 91		
Carried forward	289 58	238,777 51	377,144 42

	$ c.	$ c.	$ c.
Brought forward	289 58	238,777 51	377,144 42
Contract work	20,825 00		
Inspection, $171; labor, $322.59	493 59		
		21,608 17	
Wellesley Street, Sherbourne to Parliament.			
Contract work		1,775 25	
BRICK.			
Borden Street, College to Ulster.			
4,631 ft. lumber, $54.93; 2,775 bricks, $20.81	75 74		
5 bbls. cement, $11.75; 400 lbs. nails, $8.32; 1 culvert trap, $5	25 07		
3 yds. sand, $2.10; 2,880 yds. sod, $100.80; 66 ft. pipe, $9.90	112 80		
Bends, junctions, nozzles, etc	6 36		
Contract work	6,082 35		
Inspection, $126; labor, $373.60	499 60		
		6,801 92	
Brookfield Street, Queen to Humbert.			
1,050 bricks, $7.87; 4 bbls. cement, $9.40	17 27		
Pipe, sand, globes, etc	4 53		
Contract work	3,055 75		
Inspection, $105; labor, $55.53	160 53		
		3,238 08	
Buchanan Street, Yonge to Teraulay.			
4,500 bricks, $652.50; 1,513 ft. kerb, $502.56	1,155 06		
Teaming and setting kerb, $135.70; repairing tools, $6.11	141 81		
96 yds. sand, $83.52; customs' entry, $35.80	119 32		
Labor	340 15		
		1,756 34	
Bellevue Place, Bellevue to Carlyle.			
67,700 bricks, $931.30: 67½ bbls. cement, $152.23	1,083 53		
1,012 ft. kerb, $332.58; teaming kerb, $35.36	367 94		
Setting kerb, $60.78; sharpening tools, $3.10	63 88		
42 yds. gravel, $31.08; 98 yds. stone, $137.20	168 28		
120 yds. sand, $84; paving pitch, $15.72	99 72		
Pipe, bends, manhole steps, etc	9 64		
Customs' entry	26 00		
Labor	688 93		
	2,507 92		
Carried forward		273,957 27	377,144 42

	$ c.	$ c.	$ c.
Brought forward	2,507 92	273,957 27	377,144 42
Cr.			
2 bbls. pitch, $6.64; 50 bbls. cement, $15.50	22 14		
		2,485 78	
Cameron Street, Queen to Cameron Place.			
952 bricks, $6.94; 4 bbls. cement, $9.40; $1\frac{3}{4}$ yds. sand, $1.22	17 56		
Contract work	2,267 50		
Inspection, $81.50; labor, $52.82	134 32		
		2,419 38	
Crawford Street, Arthur to North End.			
1,210 ft. lumber, $14.54; 100 lbs. nails, $2.08	16 62		
700 bricks, $5.35; 3 bbls. cement, $7.05	12 30		
Sand, bends, etc	2 02		
Contract work	5,536 89		
Inspection, $108; labor, $114.69	222 69		
		5,790 52	
Concord Avenue, Bloor to 180 ft. South of Hepbourne.			
2,100 ft. lumber, $25.58; 50 lbs. nails, $1.04	26 62		
1,550 bricks, $11.63; 3 bbls. cement, $7.77	19 40		
$2\frac{1}{2}$ yds. sand, $1.85; 24 ft. pipe, $3.60; 2 bends, $1.50	6 95		
1 pounder, 25c.; 2 gals. coal oil, 35c	60		
Contract work	3,263 05		
Inspection, $148.50; labor, $110.83	259 33		
		3,575 95	
Cameron Place, Cameron to Vanauley.			
3,800 bricks, $406.55; 9 bbls. cement, $26.99	433 54		
562 ft. lumber, $48.92; $1\frac{1}{4}$ yds. sand, $24.15	73 07		
1 culvert trap, $5; 62 yds. gravel, $69.75	74 75		
Nails, $4.05; hammers and handles, $1.10	5 15		
Pipe, bends, etc	11 93		
Labor	231 65		
		829 59	
Dundas Street, Queen to Arthur.			
Contract work		938 34	
Denison Square, Augusta to Bellevue.			
254 yds. sod	8 89		
Contract work	830 36		
Inspection, $58; labor, $40.37	98 37		
		937 62	
Carried forward		290,934 45	377,144 42

	$ c.	$ c.	$ c.
Brought forward		290,934 45	377,144 42
Frazer Street, King to 239 ft. South.			
Contract work	1,327 42		
Inspection, $72.50; labor, $12.95	85 45		
		1,412 87	
Fuller Street, Queen to Pearson.			
Inspection, $31; labor $78.52		199 52	
Grove Avenue, Foxley to Dundas.			
6,680 ft. lumber, $43.98; 1,615 ft. kerb, $622.41	666 39		
112,436 bricks, $1,400.97; 114 bbls. cement, $466.95	1,867 92		
Teaming and setting kerb, $143.19; repairing tools, $4.70	147 89		
218 yds. sand, $152.60; 3,575 lbs. paving pitch, $28.60	181 20		
170 yds. stone, $259; 1,134 yds. sod, $19.84	278 84		
Duty on stone, $10.10; 1 culvert trap, $5	15 10		
204 yds. gravel, $150.96; 50 lbs. nails, $1.04	152 00		
Pipe, bends, etc	18 54		
Labor	1,097 60		
		4,425 48	
Garden Avenue, Roncesvalles to Soraurен.			
7,150 bricks, $53.62; 16 bbls. cement, $41.44	95 06		
10¾ yds. sand, $7.53; 1 culvert trap, $5; manhole steps, $3.84	16 37		
Pipe, bends, etc	9 43		
Contract work	5,457 39		
Inspection, $102.50; labor, $286.82	389 32		
		5,967 57	
Huron Street, Grange to St. Patrick.			
1,500 ft. lumber, $18.13; 783 ft. kerb, $287.67	305 80		
53,150 bricks, $734.51; 131½ bbls. cement, $297.74	1,032 25		
44 yds. gravel, $32.56; 108 yds. sand, $75,60	108 16		
100 yds. stone, $150; pitch, $16.88; nails, $2.08	168 96		
Freight and duty	28 48		
Inspection, $12; labor, $542.29	554 29		
		2,197 94	
Carried forward		305,047 83	377,144 42

	$ c.	$ c.	$ c.
Brought forward		305,047 83	377,144 42
Lippincott Street, College to Ulster.			
Lumber, $6.12; 300 lbs. nails, $6.24; 835 bricks, $6.26	18 62		
4½ bbls. cement, $11.66; 1,100 lbs. castings, $16.50	28 16		
2 ft. pipe, 30c.; 1½ yds. sand, $1.05	1 35		
Contract work	5,636 53		
Inspection, $121; labor, $191.99	312 99		
		5,997 65	
Leonard Avenue, Bellevue Place to Nassau.			
Labor		2 79	
Orford Avenue, Parliament to 243 ft. East.			
29,200 bricks, $423.40; 73 bbls. cement, $179.20	602 60		
502 ft. kerb, $173.15; 243 yds. sod, $8.50	181 65		
Teaming kerb, $15.56; 46 yds. stone, $69	84 56		
88 yds. sand, $74.16; lumber, $1.11	75 27		
Tools	4 52		
Inspection, $3; labor, $307.29	310 29		
		1,258 89	
Orford Avenue, Clara to 119 ft. West.			
8,800 bricks, $127.60; 19 bbls. cement, $46.48	174 08		
249 ft. kerb, $85.95; teaming kerb, $7.48	93 43		
14 yds. stone, $21; 32 yds. sand, $26.72	47 72		
Sod, hoes, lumber, etc	5 03		
Inspection, $3; labor, $94.25	97 25		
		417 51	
Orde Street, Murray to University.			
37,900 bricks, $534.15; 11 bbls. cement, $6.72	540 87		
74 yds. stone, $111 : 1980 ft. kerb, $26.73	137 73		
2 culvert traps, $10; 1½ cord posts, $7.38; 59 yds. sand, $41.30	58 68		
Pipe, bends, junctions, etc	17 10		
Inspection, $6.50; labor, $232.85	239 35		
		993 73	
Pearl Street, York to Simcoe.			
1,000 bricks, $7.50; 10 bbls. cement, $25.90	33 40		
640 ft. lumber, $7.75; 5,100 lbs. castings, $76.50	84 25		
1 culvert trap, $5; 30 ft. pipe, $4.50; nails, 28c	9 78		
Carried forward	127 43	313,718 40	377,144 42

	$ c.	$ c.	$ c.
Brought forward	127 43	313,718 40	377,144 42
4 yds. sand	3 48		
Contract work	3,187 20		
Inspection, $127.50 ; labor, $182.50	310 00		
		3,628 11	
Robinson Street, Bathurst to Palmerston.			
4,550 bricks, $34.12; 10 bbls. cement, $25.90	60 02		
5 culvert traps, $25 ; 7 yds. sand, $4.90	29 90		
Pipe, bends, etc.	13 05		
Labor	114 20		
		217 17	
Ross Street, College to Cecil.			
1,987 yds. sod	69 55		
Labor	134 95		
		204 50	
St. Patrick Street, Spadina to Denison.			
600 bricks, $4.50 ; 2 bbls. cement, $5.18 ; sand, 52c	10 20		
Pipe, bends, etc	2 15		
Contract work	6,179 50		
Inspection, $203 ; labor, $156.08	359 08		
	6,550 93		
Amount paid Treasurer	26 00		
		6,524 93	
Sorauren Avenue, Queen to Wright.			
12,658 ft. lumber, $153.31 ; 600 lbs. nails, $12.48	165 79		
565 lbs. iron, $14.13 ; 183½ bbls. cement, $412.73 ; 354 yds. sand, $247.94	674 80		
391,650 bricks, $5,414.50 ; 3 culvert traps, $15	5,429 50		
20,884 ft. kerb, $293.08 ; 543 yds. gravel, $722.25	1,015 33		
Making templates, etc	18 91		
1,100 lbs. spikes, $25.50 ; coal oil, $1.75 ; lamps, $1.45	28 70		
11 cords posts, $54.12 ; 100 ft. hose, $26 ; pipes and bends, $7.35	87 47		
Tools (rakes, levels, saws, pounders, etc.)	43 18		
Labor	1,612 30		
		9,075 98	
Selby Street, Sherbourne to Huntley.			
Contract work		196 57	
Carried forward		333,565 66	377,144 42

	$ c.	$ c.	$ c.
Brought forward		333,565 66	377,144 42
CEDAR BLOCK PAVEMENTS.			
Adelaide Street, Bay to York.			
2 bbls. cement, $5.18; 1,000 bricks, $7.50	12 68		
2 yds. sand	1 74		
Contract work	1,770 50		
Inspection, $27; labor $36.36	63 36		
		1,848 28	
Arthur Street, Bathurst to Euclid.			
Contract work		139 30	
Keatty Avenue, King to Queen.			
10,784 ft. lumber, $130.35; 700 lbs. nails, $14.56	144 91		
50 bricks, 38c.; ½ bbl. cement, $1.29	1 67		
Contract work	1,608 48		
Inspection, $54; labor, $96.77	150 77		
		1,905 83	
Broadway Place, Spadina to 159 ft. West.			
1,228 ft. lumber, $14.66; 18¾ cords cedar blocks, $95.63	110 29		
4 bbls. cement, $10.36; 52 yds. gravel, $38.48	48 84		
¾ cord posts, $3.69; 650 bricks, $4.85	8 54		
2 yds. sand, $1.40; 1 bend, 75c.; 1 red globe, 22c	2 37		
Labor	196 20		
		366 24	
Bay Street, Front to Esplanade.			
Contract work	1,327 50		
Inspection, $58.50; labor, $20	78 50		
		1,406 00	
Colborne Street, Church to West Market St.			
Contract work		67 50	
Clarence Square, North, East and South Sides.			
Contract work		137 10	
Bolton Avenue, Queen to Gerrard.			
Contract work		395 08	
Carried forward		339,830 99	377,144 42

	$ c.	$ c.	$ c.
Brought forward		339,830 99	377,144 42
Clinton Street, Mansfield to College.			
Contract work	897 30		
Inspection, $45; labor, $15	60 00		
		957 30	
Carlyle Street, St. Patrick to 376 ft. North:			
650 bricks, $4.85; 2 bbls. cement, $5.18; 1½ yds. sand, $1.05	11 08		
1 bend, 75c.; 3 gals. coal oil, 52c	1 27		
Contract work	502 87		
Inspection, $28; labor, $49.92	77 92		
		593 14	
Euclid Avenue, Arthur to Robinson.			
2,000 bricks, $15; 6½ bbls. cement, $15.27; 1 culvert top, $5	35 27		
Sand, pipe, bends, etc	8 88		
Contract work	2,312 09		
Inspection, $140; labor, $95.36	235 36		
		2,591 60	
Florence Street, Dufferin to Brock.			
2,081 ft. lumber, $25.21; 1,725 bricks, $12.94	38 15		
7 bbls. cement, $18.13; 4 culvert traps, $20	38 13		
Pipe, sand, bends, etc	15 18		
Contract work	1,416 06		
Inspection, $80; labor, $146.17	226 17		
		1,733 69	
Gwynne Avenue, King to Queen.			
Contract work		169 50	
Lorne Street, Front to Esplanade.			
1 bbl. cement	2 59		
Contract work	821 70		
Inspection, $42; labor, $28.54	70 54		
		894 83	
Maple Grove Avenue, Brock to O'Hara.			
Contract work	573 30		
Inspection, $48; labor, $25.31	73 31		
		646 61	
McCaul Street, Queen to College.			
Contract work		478 74	
Carried forward		347,896 40	377,144 42

	$ c.	$ c.	$ c.
Brought forward	.....	347,896 40	377,144 42
Nassau Street, Bathurst to Lippincott.			
¾ cord blocks	3 83		
Contract work	395 10		
Inspection, $7.50; labor, $7.49	14 99		
		413 92	
Oxford Street, Augusta to Lippincott.			
2,075 bricks, $15.57; 6½ bbls. cement, $16.83	32 40		
2,161 ft. lumber, $26.07; 6 yds. sand, $4.20	30 27		
200 lbs. nails, $4.16; bends, etc., $3.02	7 18		
Contract work	1,040 00		
Inspection, $48.50; labor, $190.48	238 98		
		1,348 83	
Queen Street, Gwynne to Roncesvalles.			
Contract work	.....	727 56	
Queen Street, Niagara to Gladstone.			
6,000 ft. lumber, $70.98; 450 lbs. nails, $7.28	78 26		
½ bbl. cement, $1.18; 1 street Y. gully, $25.50	26 68		
Contract work	4,123 81		
Inspection, $162.50; labor, $49.98	212 48		
		4,441 23	
Russell Street, Spadina to St. George.			
600 bricks, $4.50; 3 bbls. cement, $7.77; 2 yds. sand, $1.40	13 67		
Contract work	960 00		
Inspection, $65; labor, $77.58	142 58		
		1,116 25	
Rolyat Street, Dundas to Grove.			
1,700 bricks, $12.75; 6 bbls. cement, $15.54; nails, $1.04	29 33		
1,566 ft. lumber, $19.05; 3¼ yds. sand, $2.28	21 33		
Pipe, bends, etc	2 63		
Contract work	923 68		
Inspection, $55.50; labor, $101.93	157 43		
		1,134 40	
Spadina Avenue, Queen to Adelaide.			
1,825 bricks, $13.69; 8 bbls. cement, $20.72	34 41		
5½ yds. sand, $3.85; 4 ft. pipe, 60c.; coal oil, 35c	4 80		
Contract work	800 00		
Inspection, $93; labor, $165.31	258 31		
		1,097 52	
Carried forward	.....	358,176 11	377,144 42

	$ c.	$ c.	$ c.
Brought forward	.....	358,176 11	377,144 42
Sully Crescent, Sully to Shaw.			
Contract work	785 70		
Inspection	26 50		
Labor	24 53		
		836 73	
Sackville Street, Gerrard to Carlton.			
10 bbls. cement, $25.90; 78 ft. lumber, $1.55; nails, 18c.	27 63		
1,500 bricks, $11.25; 1 cord blocks, $5.10; 6 yds. sand, $5.22	21 57		
8 ft. pipe	2 20		
Contract work	1,230 25		
Inspection, $49.50; labor, $56.32	105 82		
		1,387 47	
Scollard Street, Yonge to Hazelton.			
Contract work	.....	276 56	
Shaw Street, Queen to Arthur.			
Contract work	.....	441 35	
Walmer Road, Lowther to Castle.			
Contract work	.....	141 70	
West Lodge Avenue, Marion to 1,145 ft. N.			
1,844 ft. lumber, $22.43; ¼ cord blocks, $1.28; nails, $4.16	27 87		
650 bricks, $4.88; 2 culvert traps, $10; 2½ bbls. cement, $6.47	21 35		
Moving hydrant	10 51		
Sand, bends and pipe	2 98		
Contract work	1,566 09		
Inspection, $49; labor, $86.56	135 56		
		1,764 36	
Bathurst Street, Front to Niagara.			
Contract work	.....	376 00	
Elliott Street, Bolton to Broadview.			
Contract work	.....	123 90	
Humbert Street, Dundas to Dovercourt.			
Contract work	.....	103 70	
Carried forward	.....	363,627 88	377,144 42

	$ c.	$ c.	$ c.
Brought forward		363,627 88	377,144 42
Murray Street, Caer Howell to North End.			
Contract work		141 30	
St. Patrick Street, Bathurst to Denison.			
Contract work		130 00	
GRAVEL PAVEMENTS.			
Beaconsfield Avenue, Queen to Afton.			
Contract work		158 30	
Brock Avenue, Queen to Dundas.			
Contract work		467 56	
Cowan Avenue, King to Queen.			
Contract work		379 45	
Collahie Street, Gladstone to Beaconsfield.			
26,404 ft. lumber, $33.23; 2 cord posts, $8.80	42 03		
308 yds. gravel, $339.57; 100 lbs. spikes, $2.85	342 42		
Use of roller, $6; coal oil, etc., 60c	6 60		
Inspection, $3; labor, $164.04	167 04		
		558 09	
Dunn Avenue, Queen Street to the Lake.			
Contract work	389 44		
Reduction for over-time	105 00		
		284 44	
Dufferin Street, Peel to Dundas.			
Contract work		294 50	
Dovercourt Road, Queen to Dundas.			
Contract work		264 69	
Foxley Street, Dundas to Dovercourt Road.			
Contract work		122 40	
Lansdowne Avenue, Queen to Union.			
Contract work		322 89	
Carried forward		366,751 50	377,144 42

	$ c.	$ c.	$ c.
Brought forward		366,751 50	377,144 42
Lisgar Street, Afton to Dundas.			
Contract work		124 50	
McDonnell Avenue, Queen to 2,826 ft. N.			
Contract work		392 60	
O'Hara Avenue, Queen to 1,455 ft. North.			
Contract work		196 80	
Peel Avenue Gladstone to Dufferin.			
Contract work		50 80	
MACADAM PAVEMENTS.			
Crescent Road, Yonge to Rosedale Road.			
9 bbls. cement, $23.31; 2,000 bricks, $15; 462 ft. lumber, $5.51	43 82		
3 culvert traps, $15; sand, $3.48; pipe, $7.50; nails, 6c	26 04		
Contract work	3,132 54		
Inspection, $188.40; labor, $173.46	361 46		
		3,563 86	
Davenport Road Yonge to Hazelton Avenue.			
Contract work		455 60	
Davenport Road Avenue Road to 636 ft. West.			
237 ft. stone kerb	78 93		
36 yds. granite	63 00		
		141 93	
Dufferin Street, Dundas to Lindsay.			
3,276 bricks, $24.56; 10 bbls. cement, $25.90	50 46		
1,750 ft. lumber, $21.07; 2 cords cedar blocks, $10.20	31 27		
7 yds. sand, $4.90; 150 lbs. nails, $3.12; 62 ft. pipe, $9.30	17 32		
3 gals. coal oil, 52c; pounder, 25c; 8 bends, $6	6 77		
Contract work	3,728 64		
Inspection, $258.50; labor, $309.29	567 79		
		4,402 25	
Carried forward		376,079 84	377,144 42

	$ c.	$ c.	$ c.
Brought forward		376,079 84	377,144 42
Division Street, Spadina to Huron.			
1,200 bricks, $8.99; 5 bbls. cement, $12.95; 2½ yds. sand, $1.76	23 70		
Pipe, bends, etc	6 62		
Contract work	999 90		
Inspector, $85; labor, $87.01	172 01		
		1,202 23	
Elgin Avenue, Avenue Road to Bedford.			
800 bricks, $5.69; 4 bbls. cement, $9.40; sand, 52c; bends, $1.50	17 11		
Contract work	2,073 92		
Inspection, $96.00; labor, $80.44	176 44		
		2,267 47	
Elm Street, Yonge to University.			
452 lbs. iron, $11.30; 8 cords posts, $35.20; nails, $1.38	47 88		
62.50 toise macadam, $625; 12 bbls. cement, $30.08; spikes, $13.20	668 28		
2,228 ft. lumber, $24.68; 162 yds. gravel, $119.88	144 56		
156 yds. sand, $135.72; 1,838 ft. kerb, $219.21	354 93		
2,000 bricks, $15; 5,520 lbs. castings, $82.81	97 81		
Use of roller, $152.10; 30 ft. pipe, $4.50	156 60		
Tools	10 35		
Labor	1,253 53		
		2,733 94	
Front Street, Sherbourne to Trinity.			
2,190 lbs. castings, $32.85; 16 bbls. cement, $41.44	74 29		
116 ft. pipe, $17.40; 2,000 bricks, $15; 6 yds. gravel, $2.74	37 14		
695 ft. lumber, $8.37; 4 culvert traps, $20; 10 yds. sand, $8.70	37 07		
52 bends, 62c.; nails, 22c.; coal oil, 70c.; posts, 62c	2 14		
Contract work	4,610 83		
Inspection, $155; labor, $228.20	383 20		
		5,144 67	
Front Street, George to Sherbourne.			
1,000 bricks, $7.50; 2 bbls. cement, $5.18	12 68		
Sand and gravel	8 22		
Contract work	732 36		
Inspection, $75; labor, $79.86	154 86		
		908 12	
Carried forward		388,336 27	377,144 42

	$ c.	$ c.	$ c.
Brought forward		388,336 27	377,144 42
First Avenue, Broadview to Logan.			
11 bbls. cement, $28.49; 2,000 bricks, $15	43 49		
2 culvert traps, $10; pipe, $3.60; sand, $3.48	17 08		
Contract work	5,286 63		
Inspection, $204; labor, $188.43	392 43		
		5,739 63	
Gerrard Street, Yonge to Jarvis.			
50 yds. granite, $75; 6 cords posts, $29.52; 1,406 ft. lumber, $21.81	126 33		
86 toise macadam, $857.50; 2,280 lbs. castings, $34.20; nails, $2.72	894 42		
15 bbls. cement, $38.85; 820 lbs. spikes, $26.03; use of roller, $178.20	243 08		
2,600 bricks, $19.50; 11,560 ft. kerb, $159.04; 86 yds. stone, $129	307 54		
280 yds. sand, $248.82; 221 lbs. iron, $5.52; 1 culvert trap, $5	259 34		
Tools, etc.	38 54		
Labor	1,476 79		
		3,346 04	
Grenville Street, Yonge to Surrey Place.			
977 ft. lumber, $12.08; 278 yds. sand, $240.12; storage, $10	262 20		
25½ bbls. cement, $65.40; 276 ft. pipe, $44.40; repairs, $16.05	125 85		
316 yds. granite, $559.14; rubble, $112.33; 16 culvert traps, $80	731 47		
11,570 lbs. castings, $179.55; 10,100 bricks, $100.95	280 50		
3,117 ft. 9 in. stone kerbing, $819.53; 1,314½ yds. stone, $1,438.12	2,257 65		
Teaming, $128.55; macadam, $743.50; tiles, $71.50	943 55		
Customs & freight, $333.05; use of roller, $207.00	540 05		
Tar paper, $3.00; Coal oil, $4.96; ¼ cord posts, $1.23	9 19		
Bends, junctions, etc	4 27		
Inspection, $3.00; labor, $4,127.03	4,130 03		
	9,284 76		
Cr.			
Customs refund	3 30		
		9,281 46	
Harbord Street, St. George to Huron.			
Contract work		176 20	
Carried forward		406,879 60	377,144 42

	$ c.	$ c.	$ c.
Brought forward		406,879 60	377,144 42
Langley Avenue, Broadview to Logan.			
471¾ yds. gravel, $449.07 ; 182 ft. lumber, $2.17	451 24		
83.72 toise macadam. $845.17 ; 2 bbls. cement, $4,70	849 87		
Use of roller	105 60		
Spikes, 23c ; coal oil, 42c ; 1 cord blocks, $4.60	5 25		
Labor	589 38		
		2,001 34	
McPherson Avenue, Yonge to 1,330 ft. West.			
Contract work	1,664 63		
Inspection	72 00		
		1,736 63	
Parliament Street, Queen to Gerrard.			
1,864f t. lumber, $22.20 ; 300 ft. kerb, $4.05; 1 bbl. cement, $2.35	28 60		
571 lbs. castings, $8.55 ; 50 lbs. nails, 92c	9.47		
Contract work	5,600 00		
Inspection, $204.50 ; labor, $102.48	306 98		
		5,945 05	
Pembroke Street, Shuter to Wilton Ave.			
288 ft. lumber, $3.50 ; 11 bbls. cement, $28.49 ; nails, 18c	32 17		
1,500 bricks, $11.25 ; posts, $1.23 ; pipe, $3.00	15 48		
Contract work	1,883 20		
Inspection, $109 ; labor, $139.04	248 04		
		2,178 89	
Queen's Park Drive, Queen's Park Crescent to Bloor Street.			
Final drawback	283 50		
Cr.	283 50		
Sodding	152 43		
		131 07	
St. Alban's Street, Queen's Park Crescent to Surrey Place.			
Contract work		63 60	
Sumach Street, Gerrard to Wellesley.			
300 ft. lumber, $3.65 ; 570 lbs. castings, $8.55 ; Sand, $1.74	13 94		
639 ft. kerbing, $21.87 ; 500 bricks, $3.75 teaming, $5	30 62		
Carried forward	44 56	417,936 18	377,144 42

	$ c.	$ c.	$ c.
Brought forward	44 56	417,936 18	377,144 42
7 bbls. cement, $18.13; 26 ft. pipe, $3.90	22 03		
Contract work	4,510 80		
Inspection, $172.50; labor $107.55	280 05		
		4,857 44	
Sackville Street, Winchester to Wellesley.			
301 ft. lumber, $3.64; 1 bbl. cement, $2.59; nails, 27c.	6.50		
Contract work	2,688 61		
Inspection, $113; labor, $47.07	150 07		
		2,845 18	
Sackville Street, Wellesley to 256 ft. North.			
Contract work	547 27		
Inspection, $63; labor, $15.98	78 98		
		626 25	
Spadina Avenue, King to Front Street.			
7,995 ft. kerbing, $693.71; 41 yds. stone, $36.94	730 65		
Teaming	63 95		
Labor	57 82		
		852 42	
Spruce Street, Sumach to River.			
1 bbl. cement, $2.35; use of roller, $13.20	15 55		
Contract work	1,197 00		
Inspection, $66; labor, $111.95	177 95		
		1,390 50	
South Drive, Running South to Glen Road.			
6 bbls. cement. $15.54; 4 culvert traps, $20; nails, 46c.	36 00		
170 ft. lumber, $2.06; 3,000 bricks, $22.50	24 56		
4 yds sand, $3.48; 60 ft. pipe, $9	12 48		
Contract work	800 00		
Inspection, $153; labor, $104.42	257 42		
		1,130 46	
Sword Street, Gerrard to Spruce.			
33 toise macadam, $330; 2 bbls. cement, $5.18	335 18		
500 bricks, $3.75; 3,534 ft. lumber, $54.79	58 54		
Use of roller, $20.40; 38 yds. gravel, $30.02	50 42		
74 yds. sand, $64.38; 2 cord posts, $9.84.	74 22		
Coal oil, 18c.; iron, $1.47; 1 keg spikes, $3.75	5 40		
Inspection, $3.50; labor, $329.51	333 01		
		856 77	
Carried forward		430,495 20	377,144 42

	$ c.	$ c.	$ c.
Brought forward	.....	430,495 20	377,144 42
Victor Avenue, Broadview to Logan.			
3,000 ft. lumber, $35.01 ; 200 lbs. nails, $4 ; cement, $7.05	46 06		
Contract work	2,400 00		
Inspection, $193.50 ; labor, $73.50	267 00		
		2,713 06	
Tyndall Avenue, King to Springhurst.			
Contract work	.....	312 84	
Washington Avenue, Spadina to Huron.			
275 bricks, $2.05 ; 1 bbl. cement, $2.59	4 64		
1,300 ft. lumber, $15.61 ; sand, 35c	15 96		
Contract work	1,158 30		
Inspection, $105 ; labor, $59.89	164 89		
		1,343 79	
Wellesley Crescent, Sherbourne to Jarvis.			
128 lbs. iron, $2.11 ; 5 lbs. nails, 15c	.....	2 26	
Wellesley Street, Parliament to Sumach.			
6 bbls. cement, $14.58 ; 1,500 bricks, $10.75	25 33		
2,221 ft. lumber, $26.79 ; 1 cul. trap, $5.	31 79		
400 ft. kerb, $5.40 ; 30 ft. pipe, $4.50 ; sand and nails, $2.84	12 74		
Contract work	2,462 17		
Inspection, $195.50 ; labor, $127.17	322 67		
		2,854 70	
TAMARAC PAVEMENTS.			
Scott Street, Esplanade to Front.			
3,000 bricks, $21 ; 22 yds. gravel, $17.38.	38 38		
13 bbls. cement, $37.67 ; 1½ toise macadam, $15	52 67		
8,540 ft. lumber, $101.71 ; nails and spikes, $5.27 ; coal oil, 28c	107 26		
Asphalt pavement at intersection of Front Street	252 75		
Contract work	3,376 23		
Inspection, $79 ; labor, $155.50	234 50		
		4,061 79	
			441,783 64
Carried forward	.....	.....	818,928 06

	$ c.	$ c.	$ c.
Brought forward			818,928 06
L. I. Sewers, omitted in carrying forward on page 101			8,496 32
SUMMARY.			
Local Improvement wooden sidewalks.			
1,809,501 ft. 2 in. plank	22,277 75		
38,810 ft. 3 x 4-in. plank	560 58		
723,137 ft. 4 x 4-in scantling	7,737 89		
68,459 lbs. 5-in. nails	1,413 79		
783 lbs. 7-in. spikes	24 57		
Waterworks charges	3,551 10		
16 cord cedar posts	72 54		
23 bbls cement	56 59		
Sundries, bricks, etc	182 17		
Labor	10,476 68		
			46,353 66
Brick Sidewalks.			
224 ft. lumber	2 71		
Sundries, (bricks & nails)	144 73		
Inspection, $84; labor, $52.50	136 50		
Contract	1,661 90		
		1,945 84	
Concrete sidewalks.			
Damages	156 50		
434 bbls. cement	1,172 13		
36 ft. 9-in. pipe	5 40		
341 yds. sand and gravel	255 92		
Water works charges	285 07		
1,268 ft. lumber	24 28		
Sundries (bricks, macadam etc.)	499 87		
Inspection	1,402 49		
Labor	1,687 71		
Contract	27,403 55		
		32,892 92	
			34,838 76
Personal and departmental accounts			36,707 46
Total			945,324 26

Local Improvement Brick Sidewalks, 1899.

Street.	Side.	From	To	$	c.
Bay	East	Front	Esplanade	523	20
College	North	Huron	Spadina	315	77
Elm	South	Chestnut	Elizabeth	2	93
Richmond	"	Victoria	Yonge	334	64
Simcoe	East	Wellington	330 ft. south	83	20
Wellington	South	98 ft. 10 in. e. York	164 ft. 4 in. w. Bay.	627	59
Wilton Crescent	North	Sherbourne	184 ft. west	58	51
				1,945	84

Local Improvement Concrete Sidewalks, 1899.

Street.	Side.	From	To	$	c.
Adelaide	South	Yonge	Bay	777	17
"	"	Bay	York	1,912	21
Avenue Rd	East	Bloor	Davenport	18	00
"	West	"	"	926	14
Adelaide	North	Yonge	Freehold Loan B'd'g	286	72
Bernard Av	"	Avenue Rd.	Bedford	303	07
Bay	East	50 ft. n. of Melinda	50 ft. s. of Melinda.	231	00
Bathurst	"	St. Patrick	Roseberry	351	21
Bay	West	144 ft. n. of King.	Queen	1,344	47
"	"	King	Wellington	386	72
Bleecker	East	Wellesley	Howard	1,198	18
Classic Av	Both	Huron	Spadina	586	38
Carlton	North	Bleecker	Ontario	316	87
Church	East	King	Front	786	70
Front	South	100 ft. w. of York.	52 ft. e. of Simcoe.	610	12
"	"	Scott	Church	902	62
Homewood Av	Both	Carlton	Wellesley	2,895	01
Huron	East	Bloor	Prince Arthur	396	38
James	"	Queen	131 ft. 8 in. north.	246	33
Jarvis	"	King	Fred Victor Mission	2,151	39
Madison Av	Both	Bloor	Bernard	2,587	15
Orford	"	Clara	119 ft. west	84	26
"	"	Parliament	243 ft. east	298	26
Prince Arthur	North	St. George	190 ft. west	186	21
" "	"	Avenue Rd	Bedford	563	74
Queen	South	Simpson	142 ft. west	11	00
"	"	Bay	York	1,063	67

Street.	Side.	From	To	
Queen	North	Tecumseth	100 ft. w. of Niagara	1,589 12
"	"	Gwynne	43 ft. 6 in. e. O'Hara	2,118 81
"	"	Yonge	Sherbourne	3,310 40
"	South	East of No. 674	West of No. 684	187 33
Spadina Rd.	Both	Bloor	Bernard	3 00
St. George	West	Prince Arthur Av.	171 ft. north	158 40
Sherbourne	East	Wilton	Gerrard	376 55
Sussex Av	North	St. George	Huron	293 72
St. George	East	Lowther	200 ft. north	153 56
"	"	College	Hoskin	1,082 56
Willcock	Both	Huron	Spadina	709 51
"	South	St. George	Huron	295 79
Walmer Rd	West	Bloor	Lowther	662 90
Wellesley Cres.	South	Sherbourne	T. Long's property.	46 81
Yonge	West	Yorkville	Davenport Rd.	549 48
				32,898 92
		Cr.		
Temperance	South	Yonge	100 ft. west	6 00
				32,892 92

LOCAL IMPROVEMENT WOODEN SIDEWALKS.

Street.	Side.	From	To	
				$ c.
Argyle	North	Lisgar	Northcote	245 28
Argyle	"	Gladstone	"	73 06
Abell	West	Queen	362 ft. south	70 99
Afton	North	Lisgar	Beaconsfield	154 40
Avenue Place	South	Avenue Rd	Hazelton Av	115 33
Adelaide	North	Maude	Brant	97 15
Argyle	"	Dundas	Givens	115 01
"	"	Dovercourt Rd.	Lisgar	73 07
Arthur	"	Crawford	Bellwoods	294 68
Amelia	"	Sackville	Sumach	203 08
Albert	"	James	Chestnut	216 62
Alexander	South	85 ft. east of Yonge	Church	200 91
Allen Ave	"	Broadview	Logan	158 30
Augusta	West	St. Patrick	Nassau	386 65
"	"	Oxford	College	113 92
Argyle	South	Dundas	Dovercourt	318 72
Aberdeen	North	Ontario	276 ft. east	90 68
Adelaide	South	Portland	285 ft. east	72 75
Albert	"	Teraulay	Chestnut	138 51

Street.	Side.	From	To	$ c.
Arthur	North	Bellwoods	Manning	124 19
Austin Av	"	Pape	581 ft. east	215 80
Arthur	"	Crawford	Ossington	243 68
Austin	South	Pape	615 ft. east	4 76
Bathurst	East	Farley	Adelaide	172 84
Baldwin	South	Beverley	McCaul	229 25
Bain	"	Pape	Carlaw	119 48
Bathurst	West	Bloor	Follis	417 70
Baldwin	South	Augusta	Kensington	61 84
Brunswick	East	Lowther	130 ft. northerly	34 61
Beau and Elm	W.&N.	Glen Rd	Jameson	127 79
Bellevue Pl	South	Denison	West end	198 20
Berkeley	East	Gerrard	1st lane north	42 48
Belmont	North	Yonge	361 ft. west	57 01
Beaconsfield	Both	Queen	Afton	973 77
Bowman	East	Carlton	East end	82 08
Bloor	South	North	82 ft. east	28 84
Belmont	"	Yonge	McMurrich	89 78
Birch	"	"	Gange	100 50
Bismarck	North	Park Rd	East end	79 78
"		Yonge	Park Road	124 56
Bright	Both	King	Queen	175 15
Brant	West	"	Adelaide	219 94
Bloor	South	Major	Brunswick	78 74
Brookfield	Both	Queen	Humbert	409 32
Breadalbane	South	Surrey Pl	154 ft. east	58 67
Blackmore La	North	Davenport	East end	32 74
Bloor	"	Bathurst	Markham	78 79
"	"	"	171 ft. east	91 64
Breadalbane	South	Yonge	St. Vincent	50 06
Bond	East	Shuter	Gould	236 45
"	West	Wilton	Gerrard	308 32
Bathurst	"	King	McDonnell Sq	120 54
College	North	St. Clarens	Sheridan	241 41
"	South	Dovercourt	Rusholme	109 96
"	North	Rusholme	130 ft. east	27 82
Chestnut	East	Albert	Agnes	234 39
Christopher	Both	Chestnut	University	147 21
Chippewa	East	Lake Shore	1,093 ft. north	428 51
Chestnut	West	Christopher	Chestnut Pl	104 83
College	North	Huron	University	282 38
Charles	South	Church	388 ft. west	105 09
Cherry	East	Front	Mill	128 34
Chestnut	"	Queen	Albert	102 16
Charlotte	West	King	Adelaide	158 65
Churchill	South	Dovercourt	Lakeview	130 49
Cottingham	North	Avenue Rd	Rathnally	169 96
Commercial La	"	Jarvis	Francis	21 22
Cottingham	"	Yonge	473 ft. west	110 27
Cecil	South	Huron	Henry	53 46
Caer Howell	North	McCaul	University Av	195 69

Street.	Side.	From	To	$ c.
Davenport Rd	South	Hazelton Ave	65 ft. west	10 81
"	North	Bedford	C. P. Railway	172 31
Danforth	South	Broadview	Pape	615 01
Dewson	North	Deleware	Concord	61 24
Defoe	"	Massey	Strachan	32 49
"	South	"	"	39 38
Delaney Cres	Both	Brock	Wyndham	328 42
Division	"	Spadina	Huron	287 43
Dovercourt Rd	West	Bloor	Shanley	277 49
"	East	"	Northumberland	85 69
Dufferin	"	"	600 ft. south	117 12
"	West	Dundas	College	264 67
"	East	College	Sylvan	125 30
"	West	S. of No. 390	200 ft. north	33 63
Dundas	South	Brock	St. Clarens	175 10
Duchess	North	Parliament	Berkeley	86 56
Dundas	"	Dovercourt	Coolmine Rd	61 30
"	South	Coolmine	Rusholme	16 59
"	West	Queen	364 ft. north	73 16
Dufferin	"	133 ft. n. of Muir.	1,341 ft. south	44 57
Dupont	North	Palmerston	Manning	170 01
Denison Sq	"	Bellevue	Augusta	76 25
Euclid Av	East	Queen	Robinson	102 13
Eastern Av	North	Sumach	Sackville	161 14
Euclid	East	College	748 ft. south	288 75
"	"	Robinson	Arthur	494 92
Elizabeth	"	101 ft. n. of College	Grenville	28 62
Edwin	West	North end	210 ft. s. of William	251 72
Elizabeth	East	Gerrard	Hayter	60 70
Euclid	West	Queen	Robinson	292 11
Eastern Av	South	St. Lawrence Sq	Water	80 36
Elliott	"	Broadview	Bolton	206 84
Euclid	East	N. limit of No. 261	N. limit of No. 229.	124 21
Front	South	Trinity	Cherry	160 03
Frederic	West	King	Duke	63 96
Franklin	"	Irving	Royce	112 37
Florence	North	Brock	Sheridan	90 45
Fraser	West	King	213 ft. south	63 06
Front	North	Parliament	Berkeley	97 72
"		Berkeley	Princess	201 57
Grange	South	Spadina	Vanauley	137 44
Gange	East	Cottingham	Birch	60 74
Gerrard	North	Parliament	Sackville	204 50
George	West	Front	King	114 40
"	East	Duke	Duchess	112 91
Gifford	Both	Spruce	Carlton	267 67
Gladsone	West	Dundas	Trafalgar	371 14
"	"	Trafalgar	Waterloo Av	72 44
Grange Rd	North	Beverley	328 ft. w. McCaul	80 39
Gladstone	East	Argyle	325 ft. north	135 61

Street.	Side.	From	To	$ c.
Gloucester	North	Yonge	Church	538 64
Grange Av	South	Vanauley	Esther	131 95
Harbord	South	Bathurst	Markham	56 55
"	North	Manning	Clinton	82 24
"	"	Robert	Spadina	112 89
Hayter	South	Mission Av	Teraulay	39 52
Hackney	West	Woolsley	Grange	156 20
"	East	"	St. Patrick	204 54
Harrison	North	Dovercourt	Lakeview	100 97
"	"	Lakeview	Ossington	110 68
Harbord	South	Spadina	St. George	22 33
Herrick	Both	Lippincott	Borden	118 32
Howard	South	Ontario	Psrliament	175 13
"	North	Glen Rd	"	310 52
Howland Rd	West	Gerrard	Victor	101 30
Howland Av	North	Indian Rd	500 ft. east	87 85
Huron	West	Cecil	College	207 87
Huntley	"	Elm Av	South Drive	119 18
Humbert	South	Dundas	Brookfield	52 75
James	West	Albert	92 ft. s. of Louisa	42 37
"	East	"	Louisa	60 64
Jameson	West	King	Leopold	157 65
John	East	"	Richmond	217 19
"	"	Queen	Grange Rd	390 96
"	West	King	114 ft. south	32 06
Kensington	West	St. Andrew's	Baldwin	90 47
"	"	St. Patrick	576 ft. north	151 94
King		Bathurst	Peter	689 35
"	South	Massey	Strachan	44 03
"	North	Strachan	Walnut	211 94
"	"	Dufferin	Dunn	359 06
Knox Av	East	Queen	Eastern	110 69
Lisgar	East	Queen	Afton	514 90
Larch	Both	St. Patrick	Grange	130 87
Lennox	"	Lippincott	Bathurst	205 71
Lewis	"	Queen	Eastern	360 08
Lorne	East	Front	Esplanade	110 80
Lobb	South	Crawford	Shaw	69 33
Lippincott	West	Ulster	Harbord	9 40
Markham	West	College	House No. 228	81 41
Marshall	South	Brock Av	135 ft. east	24 52
Maitland	North	Church	Jarvis	298 51
Markham	East	Queen	Robinson	150 10
"	"	316 ft. n. of Arthur	College	432 89
"	"	100 ft. n. of London	200 ft. north	37 44
Marion	Both	Fuller	Sorauren	301 36
Maple Grove	South	Sherbourne	Glen Rd	7 24
Mercer	"	John	Peter	159 47

Street.	Side.	From	To	$ c.
Mill	North	Water	Beachall	128 27
"	"	Cherry	Water	118 58
Millstone La	"	York	East end	75 12
Muir	"	Brock	Sheridan	89 69
Morse	East	Queen	Eastern	258 68
McMillan	East	75 ft. n. Maitland	House No. 5	44 40
McDonnell Sq.	North	Bathurst	426 ft. west	77 25
"	"	"	233 ft. w. of Spence	192 60
Niagara	South	Tecumseth	Wellington	126 85
"	North	Portland	Bathurst	34 36
North	West	Czar	St. Mary	62 77
Northcote	East	Queen	Afton	574 78
"	West	Argyle	"	166 19
Noble	North	Brock	300 ft. east	79 39
Ontario	West	Howard	Wellesley	351 20
Osler	East	Royce	North end	175 04
Ossington	West	Dewson	Bloor	556 64
Ontario	"	Carlton	321 ft. north	76 53
"	"	Wilton	324 ft. north	69 42
"	East	Winchester	Wellesley	214 26
Orde	North	Murray	The Avenue	62 10
Ontario	East	Wellesley	Howard	390 04
Pearl	South	Simcoe	247 ft. east	89 97
Parliament	West	40 ft. w. Prospect	Wellesley	78 20
"	East	155 ft. n. St. David	105 ft. north	39 11
Park Rd	"	Bismarck	Collier	35 72
"	West	Bloor	"	147 33
"	East	Collier	360 ft. north	101 39
Parliament	"	Front	87 "	31 86
Poulett	"	Sydenham	240 "	40 82
Princess	West	Esplanade	Front	107 02
Price	North	Yonge	East end	81 98
Queen	South	Lewis	Broadview Av.	77 52
"	"	Caroline	177 ft. e. of Knox	785 86
"	North	Sackville	339 ft. west	148 63
"	South	Broadview	Smith's Block	159 40
"	North	Verrall	151 ft. west	79 64
"	"	Curzon	Kingston Rd	440 39
"	South	Don bridge	Smith's Block	80 52
Reynolds	East	Collier	160 ft. north	27 07
"	West	"	127 "	21 24
Richmond	South	John	York	393 68
"	North	York	Simcoe	156 79
Russell	"	Simcoe	Robert	63 22
Ross	Both	College	Cecil	367 07
Roncesvalles	East	Dundas	Lucas	416 87
Robert	"	College	Willcock	367 99

Street.	Side.	From	To	$ c.
Roxborough	South	Yonge	Scarth Rd	329 18
Royce Av	Both	Perth	West Terminus	426 86
Salisbury	South	Sackville	East end	54 70
Sackville	West	Oak	Gerrard	11 90
"	"	St. David	Wilton	115 22
Surrey Pl	East	Grenville	Grosvenor	129 14
Sumach	West	Queen	91 ft. north	62 20
"	"	Wilton	67 "	27 08
Sully	"	Arthur	Crawford	524 60
Sydenham	North	Parliament	Sumach	362 73
Shaw	East	Bellwoods Pl	Queen	475 54
"	"	"	182 ft. south	42 65
Sheridan	"	Dundas	Fisher	46 03
Shannon	South	Ossington	Dovercourt	243 43
Shaw	West	Halton	Argyle	131 69
Stewart	South	Bathurst	Portland	222 89
Shuter	"	Yonge	118 ft. east	91 26
Sheppard	Both	Richmond	Adelaide	209 37
Spruce	North	Gifford	139 ft. east	40 69
Shirley	"	Brock	St. Clarens	136 12
St. Patrick	South	Esther	Denison	103 71
"	"	Denison	Bathurst	160 20
St. Nicholas	East	St. Mary	Czar	38 69
St. James Av	North	Ontario	Rose	71 88
St. Joseph	"	Chapel	The Park	219 52
St. Mary	"	Yonge	St. Nicholas	50 11
St. Joseph	South	"	"	49 92
St. Patrick Sq	East	Queen	Stephanie	79 86
St. Mary	North	North	West end	197 22
St. Patrick	"	Spadina	Denison	286 33
St. Helen's Av	West	Dundas	116 ft. s. of Pierce	306 11
Saulter	East	Queen	G. T. Railway	253 96
Sackville	"	St. David	62 ft. south	21 24
"	"	Winchester	Carlton	125 36
Sarah	"	Belmont	101 ft. south	16 21
Sackville	West	Wellesley	Amelia	80 68
Salisbury	North	Sackville	East end	137 53
Sackville	East	Winchester	Salisbury	69 26
"	West	Oak	Gerrard	215 47
South Drive	N.&W.	E. limit of No. 34	W. limit of No. 52	59 48
Taylor	South	Sumach	105 ft. south	19 56
Tate	North	Water	Beachall	90 93
Teraulay	East	Albert	Agnes	209 09
Tecumseth	"	Niagara	Wellington	65 05
Turner	North	Tecumseth	West end	76 96
Trafalgar	Both	Gladstone	Dufferin	262 34
Van Horne	South	Dufferin	Westmoreland	215 65
Vine	North	Eastern	306 ft. south	54 32
Wellington Av	North	Strachan Av	Stanley Park	146 39

Street.	Side.	From	To	$ c.
Wellesley	South	Sherbourne	Bleecker	54 91
"	"	Parliament	Sumach	513 19
West Lodge.	West	North Terminus	253 ft. south	171 18
Wellesley	North	Parliament	Sumach	488 88
Wellington Av.	"	Niagara	235 ft. e. Strafford	220 86
William.	East	Queen	Anderson	328 32
Wilton	North	Church	Mutual	76 39
William.	East	Caer Howell	Anderson.	147 00
Widmer	West	Adelaide	King.	115 33
Wilton	North	Sherbourne	Seaton	97 31
Winchester	South	Sackville	Sumach	226 39
Wyndham.	"	Brock	St. Clarens	97 61
Wyatt Av.	Both	Sumach	River	226 66
Wright	South	Sorauren	633 ft. west	180 98
Yonge	East	Severn	Rosedale Rd.	310 10
"	"	Cottingham	City Limits	305 66
"	"	Front	Esplanade.	130 47
"	"	Roxboro'.	McPherson	78 85
				46,353 66

APPENDIX "B."

WATER WORKS DEPARTMENT.

For Abstract of Charges see page.	ACCOUNTS.	$ c.	$ c.	$ c.
	MAINTENANCE.			
135	Maintenance of distribution	25,210 57		
136	Main Pumping Station	71,279 65		
137	Meter and Machine Shop	9,146 12		
138	Press and Store House. $2,539 47			
	" "			
138	Hydrants and valves. 4,812 00			
		7,351 47		
139	High Level Station	8,279 39		
139	Reservoir	10,023 83		
140	Cartage	3,385 03		
140	Miscellaneous	881 12		
140	Island Water Works (maintenance)	1,981 53		
			137,538 71	
	CONSTRUCTION.			
141	House services	10,005 90		
142	Short lengths and extra fire hydrants	92 06		
142	Dead ends	4 00		
143	Revenue Mains	3,199 09		
145	6-ft. steel conduit	760 19		
			14,061 24	
	RENEWALS.			
146	House services		5,650 85	
	SPECIAL SERVICES.			
146	Additional mains for fire protection	101 02		
146	Bathurst St. main to Bertram's yard	76 69		
146	Colborne St. main, Yonge to Church	240 34		
146	Don River main, on west side	60 49		
146	Filling in old filtering basin	617 69		
146	Improved water services	39 94		
146	Improved fire protection	171 21		
146	King St. main, Simcoe to Spadina.	4,838 08		
147	Lane in rear of Horticultural G'd'ns	266 60		
147	O'Hara Av. main, Marion to 650 ft. north	42 72		
147	Parkdale water supply	240 60		
147	Queen St. main, Yonge to Simcoe	207 44		
	" Simcoe to Soho	177 82		
	" Soho to Spadina	91 49		
	" Spadina to Bathurst	150 00		
	" Bathurst to Niagara	118 42		
148	Repairs to Water Works dock	792 19		
			8,232 74	
				165,483 54

	$ c.	$ c.	$ c.
MAINTENANCE.			
MAINTENANCE OF DISTRIBUTION.			
18 ft. 6-in. pipe, $47.95; 22 6-in. sleeves, $30.73	78 68		
140 double iron boxes, $151.28; 202 single iron boxes, $154.71	305 99		
197 stop cock rods, $43.04; 1,373 lbs. scrap lead, $43.92	86 96		
30 long valve chamber tops and centres, $174.92; 173 round valve chamber tops and centres, $1,340.90	1,515 82		
1-in. single cocks, $28.80; ½-in. single cocks, $116.68; ¾-in. single cocks, $163.50.	309 08		
⅜-in. single cocks, $37.90; ⅝-in. single cocks, $74.75	112 65		
1,737 lbs. lead pipe, $79.81; 8 4-in. iron boxes, $16.30	96 11		
8 hydrants & jackets, $283; 186½ gals. coal oil, $26.75	309 75		
27 monkey wrenches, $33.05; 60 lbs. copper wire, $14.19	47 24		
Phone service, $115; 9 pairs boots, $36.11	151 11		
Sheet lead, $12; 2 ratchets, $9.60; stones, $37	58 60		
12 switch locks, $15; wood, $7.63	22 63		
217 bbls. cement, $550.47; 27 tons coal, $76.08	626 55		
Fittings, tools and sundry material	61 66		
Patterns, $478.86; 7,195 ft. lumber, $97.75	576 61		
2 sets harness, $99.10; 2,347 lbs. nails, $47.40	146 50		
Sidewalk charges, $9.40; repairs, $67.65.	76 45		
142,000 bricks, $1,025; 502 cement plates, $72.44	1,097 44		
163 round service plates, $8.72; horse-shoeing, $28	36 72		
210 driving nipples, $55.40; 210 brass-screwed nipples, $76.82	132 22		
362 brass couplings' $143,36; 12-in. pipe, $14.62	157 98		
Rent of yard, $300; horse feed, $163.44	463 44		
Bushings, valves, bends, elbows, etc	36 80		
5-in. pipe, $9.96; 6,517 ft. 2-in. pipe, $222.04	232 00		
10 lengths 6-in. pipe, $48; 60 ft. 2-in. pipe, $6	54 00		
919 lbs. iron, $24.52; ferry fares, $23.50	48 02		
132 4-in. files, $19.80; 2 ladders, $20; sash bar, $8.50	48 30		
35 lengths 4-in. pipe, $113.75; 24½ gals. paint, $24	137 75		
Carried forward	7,027 06		

	$ c.	$ c.	$ c.
Brought forward	7,027 06		
128 yds. sand, $105.92; 322 ft. 1-in. pipe, $14.47	120 39		
8 8-in. sleeves, $10.31; 5 12-in. sleeves, $16.10	26 41		
739¾ lbs rope, $68.65; 5 gals. shellac, $8.75	77 40		
Lamp-wick, globes, etc	58 92		
Flanges, bends, and sundry fittings	78 27		
84 double cocks, $113.40; sundry hardware, $28.67	142 07		
Lifting track, $4.65; filling old filtering basin, $50	54 65		
Sundry material	28 86		
Labor	17,596 54		
		25,210 57	
			25,210 57
MAIN PUMPING STATION.			
10,534½ lbs. phosphor bronze castings, $128.90; 40 lbs. packing, $52.45	181 35		
Carting coal, $1,468.63; phone service, $120	1,588 63		
8 pairs boots, $34.24; 2,200 bricks, $19	53 24		
1,857 gals. engine oil, $579.12; 1,066 gals. cylinder oil, $479.12	1,058 24		
13,264 lbs. boiler compound, $663.24; repairs, $290.09	953 33		
10 wrenches, $14.75; 24 globes, $24; sectional rings, $69.35	108 10		
821 bush. fire clay, $34.89; 4,982 lbs waste, $278.17	313 06		
Wrought iron pipe, $31.67; valves, $26.28	57 95		
Fittings and sundry material	359 18		
Polish, grease and bluestone	59 68		
2,800 fire bricks, $92.70; coal oil, wick, $49.13	141 83		
$13,876\frac{525}{2000}$ tons soft coal, $33,177.91; $2,133\frac{915}{2000}$ tons anthracite, $8,684.66	41,862 57		
$19\frac{1680}{2000}$ coal screenings, $53.18; 3,212 carbons, $169.36	222 54		
Hire of scale, $8; 33 cord slabs, $86.40	94 40		
449 lbs. iron $13.23; 536 lbs. gaskets, $258.45	271 68		
135 sheets cor. iron, $18; lamps, $14.40	32 40		
Soap, $45.01; 112 lbs. wire, $26.18; nails, $12.60	83 78		
24 doz. gauge glasses, $38.28; rentals, $1,540	1,578 28		
18,828 ft. lumber, $164.04; 34 sheets galvanized iron, $20.40	184 44		
Washers, brooms, torches, etc	36 72		
118 lights glass, $42.22; lye, $13.90; candles, $7,92	64 04		
Carried forward	49,305 44		25,210 57

	$ c.	$ c.	$ c.
Brought forward	49,305 44		25,210 57
Sundry hardware	92 25		
350 lbs. oat meal, $10.50; files, $13.76; plumbago, $10.20	34 46		
Inspecting scales, $14.80; analysis of oils, $60	74 80		
Paint, turps, sand paper, etc	35 32		
Spindles, $27,35; 3½ loads mortar, $21	48 35		
Rivets, screws, and sundry material	34 15		
Customs entry, $13.60; brushes, $15.12; slate, $5.00	33 72		
Japan, white lead, etc	39 15		
Labor	24,770 54		
	74,468 18		
Less amount paid Treasurer for coal	3,188 53		
		71,279 65	
			71,279 65
METER AND MACHINE SHOP.			
108 meter boxes, $287.56; 43 meter tops, $27.55	315 11		
Meter parts, $124.40; 3,797 lbs. castings, $225.01	349 41		
41 lbs. solder, $8.81; files, $11.87; oils, $34.64	55 32		
Refund on meter, $110; $63\frac{1510}{2000}$ tons coal, $202.80	312 80		
Wrought iron pipe, $26.60; 8 meter screens, $84.12	110 72		
2,363 ft. lumber, $27.89; 11,101 lbs. iron. $283.30	311 19		
308½ lbs. steel, $25.89; 215 lbs. waste, $8.65	34 54		
Fittings and sundry material	102 63		
Sundry hardware	45 37		
15 cord wood, $41.77; nails, $10.22; paint, $13.95	65 94		
Rubber rings, H. S. blades, etc	42 08		
Inter gear, $49.50; belt dressing, $10; custom's duty, $75.11	134 61		
2 hot water meters, $278.50; 274 brass screwed nipples, $45.14	323 64		
Fittings and sundry materials	70 72		
Tools and sundry materials	36 15		
Putty, japan, screws, packing, turps	33 63		
Coal oil, $5.35; 1,380 lbs. lead pipe, $60.69; brushes, $4.93	70 97		
Ratchet, stocks and dies, $26.50; giant check valves, etc., $34.91	61 41		
Lead, sand paper, plumbago, etc	39 34		
1 piston roller, $3.50; copper, $5.60; P. valves, $6.80	15 90		
Carried forward	2,531 48		96,490 22

		$ c.	$ c.	$ c.
Brought forward		2,531 48		96,490 22
Candles, $3.48; sawdust, $4.70; valves and rings, $13.05		21 23		
Car tickets, $5; single cocks, $6.59; sundries, $1.84		13 43		
Nuts, cement, rivets and bolts		54 81		
Labor		8,289 99		
		10,910 94		
Amount paid Treasurer—				
Scrap	$ 108 00			
Loan of meter	161 70			
Moving meters	14 00			
Testing meters	5 00			
Smith's time and material.	1,229 57			
Iron, 12,929½ lbs.	198 55			
Steel, 480 lbs	48 00			
		1,764 82		
			9,146 12	
				9,146 12
PRESS AND STORE HOUSE.				
100 ft. rope, $8: 1½ cord wood, $7.50		15 50		
63½ lbs. castings, $10.80; repairs, $8		18 80		
9 tons coal, $31.85; lumber, $2.91		34 76		
'Phone service, $45; Treasurer refund, $12.67		57 67		
181 lbs. nails, $3.72; sundry hardware, $4.15		7 87		
Bolts, hasps, brooms, etc.		3 03		
Inspecting scales		4 25		
Labor		3,027 43		
		3,169 31		
Less amount paid Treasurer for scrap		629 84		
			2,539 47	
PRESS AND STORE HOUSE, HYDRANTS AND VALVES.				
69¼ lbs. phosphor bronze castings, $10.48; 1,029 lbs. castings, $15.24		25 72		
2 cast steel dies, $5.60; engine oil, $13.72		19 32		
2 cast iron dies, $5.60; 208 check nuts, $20.80		26 40		
Car tickets, $10; repairs, $27.90; 2 hydrants, $39		76 90		
9 tons coal, $39.95; 39 gals. paint, $42.20		82 15		
376 ft. lumber, $11.02; sheeting, $12.16.		23 18		
100 ft. 4-in. pipe, $16.50; 13 gals. japan, $12.20		28 70		
10 brushes, $6.50; 287 lbs. sole leather, $71.75		78 25		
Carried forward		360 62	2,539 47	105,636 34

	$ c.	$ c.	$ c.
Brought forward	360 62	2,539 47	105,636 34
11 gals. turps, $7.55; 16¾ lbs. shaved leather, $7.54	15 09		
54 ¾-in. brass plugs, $6.39; sundry hardware, $4.40	10 79		
Tees, couplings, elbows and sundry material	31 79		
Labor	4,443 71		
	4,862 00		
Less amount paid Treasurer moving hydrant	50 00		
		4,812 00	
			7,351 47
HIGH LEVEL STATION.			
1,002 lbs. boiler compound, $40.08; 145 gals. coal oil, $99.62	139 70		
Carting coal, $310.33; valves, $26.18; rose trees, $15	351 51		
57 lbs. packing, $26.40; 9 J. valves, $38.35	64 75		
932 1932/2000 tons coal, $2,406.39; 19 lbs. spiral packing, $10.45	2,416 84		
'Phone service, $67; reporting *re* Heal, $287	354 00		
866 lbs. soap, $10.34; automatic lubricator, $9	19 34		
49 gals. engine oil, $13.32; 96 gals. coal oil, $18.17	31 49		
1,168 lbs. waste, $75.73; 8 gals. paint, $8.15	83 86		
Sundry fittings	30 96		
1 Heintz S. trap, $13.88; 600 ft. oak, $9.	22 88		
Medical attendance, $12; rentals, $12.09.	24 09		
Valves, cocks, unions, elbows, etc.	33 64		
Sundry hardware, $24.86; car tickets, $5.	29 86		
Wick, lamps, globes, etc.	40 03		
Labor	4,636 44		
			8,279 39
RESERVOIR.			
Flowers and seed, $274.20; 37½ cord wood, $197	471 20		
200 ft. hose, $26; 21 lights glass, $6.68; horse feed, $119.64	152 32		
Electric light, $455.23; 'phone service, $60	515 23		
Flower pots, $214.80; 1,200 lbs. fertilizer, $19.75	234 55		
81 115/2000 tons coal, $369.73; 1,513 ft. lumber, $28.64	398 37		
325 lbs. nails, $7.25; rakes, shovels, saws, etc., $26.19	33 44		
Seats, $60; paint and white lead, $21.	81 00		
Sundry hardware	20 48		
Carried forward	1,906 59		121,267 20

	$ c.	$ c.	$ c.
Brought forward	1,906 59		121,267 20
Coal oil, globes, wicks, etc	37 16		
14,748 ft. lumber, $243.15; tobacco stems, $7.50	250 65		
Labor, maintenance	6,122 20		
" repairing banks and cleaning	2,076 73		
	10,393 33		
Less amount paid Treasurer for scrap	369 50		10,023 83
MISCELLANEOUS.			
Repairs to City buoys	66 66		
Ferry tickets, $7; car tickets, $10	17 00		
5 lbs. solder, $1; bottles and corks, $3.26; Hire of scales, $1	5 26		
Thermometers, $12; cans and sponges, $1.90	13 90		
Labor	778 30		881 12
CARTAGE.			
Horseshoeing, $97 95; horse feed, $626.58	724 53		
Repairs, $90.95; 3 sets harness, $77 70	168 65		
50 ft. hose, $10.50; 23 brushes, $6.16	16 66		
Veterinary services, $8; 1 cord wood, $5.12	13 12		
Sundry hardware	11 57		
Sawdust, glue, tallow and sundry material	17 28		
Labor	2,433 22		3,385 03
ISLAND WATER WORKS.			
Rentals, $237.50; carting coal, $8.54	246 04		
'Phone service, $45; ferry tickets, $79.40	124 40		
Sundry hardware	26 66		
136 gals. coal oil, $30.86; 2 pairs divers' mitts, $12	42 86		
80 ft. hose, $8.75; 2 lubricators, $41	49 75		
6 globe valves, $8.25; 164 lbs. lead pipe, $7.21	15 46		
Couplings, reducers and sundry fittings	18 11		
Oils, $3.86; $48\frac{1939}{2000}$ tons coal, $188.42	192 28		
Packing, $8.89; asbestos cock, $7.75	16 64		
109 lbs. waste, $7.63; soap, $5.85	13 48		
1 bbl. coal oil	11 40		
Globe, wick, lamps, etc	42 92		
Labor	1,181 53		1,981 53
Carried forward			137,538 71

	$ c.	$ c.	$ c.
Brought forward	.....	.....	137,538 71
CONSTRUCTION.			
House Services.			
86,926 lbs lead pipe, $3,773.59 ; 2,385 lbs. scrap lead, $72.69	3,846 28		
7, 6 x 6 single branch, $16.95 ; 15 6 x 12 single branch, $74.45	91 40		
171 $\frac{5}{8}$-in. driving nipples, $44.39 ; 53 $\frac{3}{4}$-in. driving nipples, $18.49	62 88		
447 single iron boxes, $331.19 ; 27 peet valves, $61	392 19		
754 $\frac{1}{2}$-in. single cocks, $506.75 ; 66 $\frac{3}{4}$-in. single cocks, $62.01	568 76		
21 1-in single cocks, $30.25 ; 27 $\frac{1}{2}$ x $\frac{3}{8}$-in. double cock, $35.75	66 00		
1,362 stop cock rods, $332.12 ; 19 valve boxes, $28.30	360 42		
15 12-in. sleeves, $48.26 ; 15 4-in. valves, $136.50	184 76		
5 long valve chamber tops, $24.76 ; brass couplings, $349.87	374 63		
124 brass screwed nipples, $35.32 ; 5 6-in. elbows, $7.90	43 22		
Wrought iron pipe, $141.57 ; 181 $\frac{3}{8}$-in. single cocks, $81.45 ; 105 $\frac{5}{8}$-in. single cocks, $79.40	302 42		
21 6-in S. pipe, $41.60; 9 6-in. valves, $118.80	160 40		
116 brass screwed nipples	32 58		
243 $\frac{1}{2}$-in. driving nipples, $54.20 ; 26 6-in. sleeves, $66.19	120 39		
79 double cocks, $106.70 ; 352 brass couplings, $76.13	182 83		
Plugs, bushings, and sundry fittings	29 83		
760 lbs. pig lead, $27.36 ; 71 $\frac{3}{4}$ x $\frac{5}{8}$-in. double cocks, $100.65	128 01		
Valve boxes, $36.40 ; round valve chamber tops and centres, $22.86	59 26		
1 hydrant, $29 ; 325 double iron boxes, $389	418 00		
99 4-in. sleeves, $27.16 ; 75 lbs. jute, $5.55	32 71		
Elbows, tees, valves, etc	15 70		
Treasurer's refund	227 50		
Labor	7,530 31		
	15,130 78		
Less amount paid Treasurer for services and moving services	5,124 88		
		10,005 90	
Carried forward	.....	10,005 90	137,538 71

	$ c.	$ c.	$ c.
Brought forward		10,005 90	137,538 71
SHORT LENGTHS AND EXTRA FIRE HYDRANTS.			
6 6 x 6 single branch, $12.78; 12-in. sleeves, $6.40	19 18		
5 6-in. sleeves, $6.78; 2 lengths 6-in. pipe, $5.20	11 98		
9 hydrants, $250.50; sleeves and elbows, $5.33	255 83		
3 10 x 6 single branch, $13.06; packing, 80c	13 86		
625 lbs. scrap lead	21 60		
Contract	33 83		
Labor	239 98		
	596 26		
Less amount paid Treasurer for scrap	504 20		
		92 06	
Dead Ends.			
Labor		4 00	
REVENUE MAINS.			
Atlantic Avenue.			
2 hydrants, $55; 470 lbs. pig lead, $20.52	75 52		
1 6-in. valve, $13.45; 2 6 x 6 single branch, $4.26	17 71		
1 long valve chamber top, $5.02; 350 ft. 6-in. pipe, $140	145 02		
10 lbs. jute, 80c.; 1 6-in. cap, 62c	1 42		
Labor	156 61		
		396 28	
Delaware Avenue.			
Contract		31 67	
Fraser Avenue.			
Contract		27 00	
Parkman Avenue.			
Contract		29 35	
Shaw Street.			
Contract		9 15	
Hunter Street.			
Contract		38 99	
Carried forward		10,634 40	137,538 71

	$ c.	$ c.	$ c.
Brought forward		10,634 40	137,538 71
Howland Road.			
Contract		18 80	
Simpson Avenue.			
22 ft. 6-in. pipe, $101.86 ; 1 6-in. valve, $13	114 86		
1 bend sleeve, $4.54 ; round valve chamber top, $7.50	12 04		
Sundry fittings	4 25		
Labor	7 50		
Contract	75 24		
		213 89	
Galley Avenue.			
15 6-in. pipes	69 45		
Contract	101 56		
		171 01	
Strachan Avenue.			
Contract		69 32	
McLean's Lane (Island.)			
Labor		57 50	
Gladstone Avenue.			
33 6-in. valves, $158.40 ; 13 6-in. pipes, $62.40	220 80		
2 6 x 6 single branches, $4.26 ; hydrant, $27	31 26		
Contract	35 37		
		287 43	
O'Hara Avenue.			
Contract		20 31	
Woolfrey Avenue.			
Ties and plugs		32	
Hogarth Avenue.			
1 hydrant, $29 ; branches and sleeves, $2.58	31 58		
Labor	13 50		
		45 08	
Danforth Road.			
1 4-in. valve, $10 ; 1 long valve chamber top, $5	15 00		
2 2-in. valves, $4.40 ; 2 valve boxes, $3.10	7 50		
Carried forward	22 50	11,518 06	137,538 71

	$ c.	$ c.	$ c.
Brought forward	22 50	11,518 06	137,538 71
Plugs, bushings, ties, etc.	7 47		
Labor	34 50		
		64 47	
Chatham Street.			
Plugs	36		
Labor	32 00		
		32 36	
Bruce Street.			
1 valve box, $10; 1 single branch, $2.70	12 70		
Sleeves, valves and 4-in. cap	3 17		
Labor	10 00		
		25 87	
Wright Avenue.			
1 6-in. valve, $13; 2 single branches, $4.26	17 26		
1 valve box, $1.55; 2 sleeves, $2.76; 1 6-in. cap, 62c	4 93		
Labor	14 00		
		36 19	
Hickory Street.			
1 4-in. valve, $10; 1 3-in. valve, $7.50; 2 round valve chamber tops, $15	32 50		
Sleeves and elbows	4 30		
		36 80	
Cherokee Avenue (Island.)			
135 ft. 3 in. of 2-in. wrought iron pipe, $13.53; 3 2-in. P. valves, $7.20	20 73		
6 couplings, $1.20; 10 tees, $2	3 20		
Elbows and nipples	44		
		24 37	
Cumming Street.			
370 ft. 6-in pipes, $170.60; 1 6-in. valve, $13	183 60		
1 round valve chamber top, $7.62; sleeves, reducers, etc., $5.43	13 05		
Contract	94 57		
Labor	10 00		
		301 22	
Havelock Street.			
35 ft. 6-in. pipe, $168; 1 6-in. valve, $13.	181 00		
1 round chamber top and centre	7 62		
Contract	87 32		
Labor	12 00		
		287 94	
Carried forward		12,327 38	137,538 71

	$ c.	$ c.	$ c.
Brought forward		12,327 38	137,538 71
St. George Street.			
31 ft. 6-in pipe, $230.40 ; 1 hydrant, $29.	259 40		
1 6-in valve, $13 ; 1 long valve chamber top, $4.88	17 88		
Sundry fittings	5 28		
Contract	101 82		
Labor	8 00		
		392 38	
Crescent Road.			
42 ft. 6-in. pipe, $201.60 ; 1 6-in. valve, $13	214 60		
2 single branches, $6.50 ; 1 hydrant, $27..	33 50		
1 round valve chamber top and centre, $7.62 ; bends and sleeves, $8.43	16 05		
Contract	155 55		
Labor	14 00		
		433 70	
Scarth Road.			
1 6-in. pipe, $2.60 ; 1 6 x 6 single branch, $2.13	4 73		
Contract	72 29		
Labor	6 00		
		83 02	
Tyndall Avenue.			
Contract		5 89	
Maple Avenue.			
Contract		7 35	
Ulster Street.			
1 4-in. valve, $10 ; 1 3-in. valve, $7.50	17 50		
1 double branch, $2.85 ; 1 6-in. pipe, $2.60	5 45		
1 4-in. sleeve, $4.22 ; 2 valve boxes, $3.10	7 32		
2 round valve chamber tops, $15.24 ; 1 6 x 6 single branch, $2.70	17 94		
Sleeves, etc	3 22		
		51 43	
New Six-foot Steel Intake Pipe.			
10,794 ft. lumber, $38.13 ; 4 frames, $9.50	47 63		
Filling over conduit, $160 ; boat hire, $57	217 00		
Ferry fares, $11.30 ; 2 gals. paint, $2.00..	13 30		
Repairs, $6 ; consultation fees, $120...	126 00		
Labor	356 26		
		760 19	
			14,061 24
Carried forward			151,599 95

	$ c.	$ c.	$ c.
Brought forward			151,599 95
RENEWALS.			
House Services.			
461 single iron boxes	339 19		
346 double iron boxes	392 62		
520 stop cock rods, $116.16; 123 lbs. lead pipe, $54.14	170 30		
42 brass screwed nipples, $10.74; cement service plates, $5	15 74		
37 driving nipples, $8.57; round service plates, $6	14 57		
399 single cocks, $243.56; 23 double cocks, $28.11	271 67		
402 brass couplings	145 55		
Jute, copper wire, handles and tallow	1 22		
Labor	4,299 99		
			5,650 85
SPECIAL SERVICES.			
Additional Main for Fire Protection.			
Contract		101 02	
Bathurst Street Main to Bertram's Yard.			
Contract		76 69	
Colborne Street Main, Yonge to Church.			
Contract		240 34	
Don River Main on West Side.			
Contract		60 49	
Filling in Old Filtering Basin.			
Contract		617 69	
Improved Water Services.			
Contract		39 94	
Improved Fire Protection.			
Contract		171 21	
King Street Main, Simcoe to Spadina.			
12 6-in. pipes, $31.20; 2 6 x 6 double branches, $5.70	36 90		
Carried forward	36 90	1,307 38	157,250 80

	$ c.	$ c.	$ c.
Brought forward	36 90	1,307 38	157,250 80
30 ⅝-in. brass screwed nipples, $7.62; 15 6-in. sleeves, $20.70	30 32		
11 round valve chamber tops, $82.50; 8-in. sleeves, $3.09	85 58		
2 reducers, $5.70; 2 hydrants, $58	63 70		
10 12 x 6 single branches, $51.36; bend sleeves, $8.26	59 62		
3 12-in. caps, $5.19; 5 6-in. valves, $65	70 19		
174 12-in. pipes, $2,884.31; 7 12-in. valves, $195.65	3,079 96		
2 12 x 12 single branches	13 36		
Sundry fittings	7 45		
Contract	1,162 63		
Labor	228 37		
		4,838 08	
Lane in Rear of Horticultural Gardens.			
1 hydrant, $27; 1 6 x 6 single branch, $2.13	29 13		
23 lengths of 6-in. pipe, $110.40; 1 6-in. valve, $13	123 40		
1 round valve chamber top and centre	7 62		
Labor	106 45		
		266 60	
O'Hara Avenue Main, Marion to 650 ft. N.			
Contract		42 72	
Parkdale Water Supply.			
Contract		240 60	
Queen Street Main, Yonge to Simcoe.			
Contract		207 44	
Queen Street Main, Simcoe to Soho.			
Contract		177 82	
Queen Street, Soho to Spadina.			
Contract		91 49	
Queen Street, Spadina to Bathurst.			
Contract		150 00	
Queen Street, Bathurst to Niagara.			
Contract		118 42	
Carried forward		7,440 55	157,250 80

	$ c.	$ c.	$ c.
Brought forward	... .	7,440 55	157,250 80
Repairs to Water Works Dock.			
39,303 ft. lumber, $525.68; boiled oil, $2.70	528 38		
200 lbs. nails, $3.55; paint, dryers and oxide, $1.12	4 67		
Labor	259 14		
		792 19	
			8,232 74
Total.....	.....	....	165,483 54

NOTE. For Schedule No. 1, "Cash Expenditure on Maintenance Account," etc., see page 134.
For Schedule No. 10, "Analysis of Expenditure at Main Pumping Station" see page 176.

SCHEDULE No. 2.

STATEMENT OF WATER PUMPED BY ENGINES NOS. 1, 2 AND 3 FOR THE YEAR 1899.

Month.	No. of Days on which Engines were Working.			Number of Hours Working Each Month.			Number of Strokes for Each Engine per Month.			Quantity of Water Pumped per Month by Each Engine in Imp. Gals. Gross.			Total Quantity Pumped in Imp. Gals. Gross	Percentage of Slip.	Total Quantity Pumped in Imp. Gals. Net.	Average Pressure on Pumps	Average Level of Water in Well Below Zero.		Total Quantity of Coal Consumed per Month by Nos. 1, 2 and 3 Engines.		Coal Consumed while Banking Fires, Etc.		Coal Consumed while Pumping.	
	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.												
				h. m.	h. m.	h. m.										Lbs.	Ft.	In.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
January				.. ..	.. ..	.. ..								6					48	1,430	48	....	....	....
February	25	..		335 10	.. ..	.. ..	267,412	....	....	60,969,936	....	....	60,969,936	6	57,311,740	95.0	6	11	201	170	13	1,060	165	1,705
March	5	....		30 30	.. ..	.. ..	23,791	....	....	5,424,348	....	....	5,424,348	6	5,098,887	95.6	5	9	21	1,120	2	....	15	1,000
April	2	8	..	7 30	59 25	.. ..	5,904	45,593	.. ..	1,346,112	20,927,187	....	22,273,299	6	20,936,901	93.7	4	7	72	610	4	...	55	....
May	4	..	....	19 20	.. ..	.. ..	15,789	....	....	3,599,892	....	....	3,599,892	6	3,383,899	97.2	5	3	19	1,590	5	1,491	9	620
June	2	....	....	56 35	.. ..	.. .	45,559	....	....	10,387,452	....	....	10,387,452	6	9,761,205	96.4	5	10	43	020	2	516	25	1,667
July	28	....	....	255 40	.. ..	. ..	202,310	....	....	46,126,680	....	....	46,126,680	6	43,359,079	95.7	5	10	131	380	11	712	117	1,242
August	27	1	....	291 05	1 50	.. ..	227,011	993	....	51,758,508	455,787	....	52,214,295	6	49,081,437	95.2	6	6	185	750	13	016	130	195
September	11	2	....	87 50	23 55	.. .	71,750	13,518	....	16,359,000	6,204,762	....	22,563,762	6	21,209,936	95.7	6	6	59	490	4	916	61	870
October	2	1	3	9 35	15 20	33 20	5,895	9,520	25,482	1,344,060	4,369,680	12,384,252	18,097,992	6	17,012,113	89.8	4	3	35	030	12	1,480	49	500
November	21	1	....	179 00	1 10	.. ..	139,806	807	....	31,875,768	370,413	....	32,246,181	6	30,311,110	94.8	6	3	114	1,680	8	350	83	500
December	12	....	19	249 10	.. ..	388 05	177,760	....	302,426	40,529,280	....	146,979,036	187,508,316	6	176,257,817	94.7	6	1	452	490	35	....	514	250
Totals	139	13	22	1,521 25	101 40	421 25	1,182,987	70,431	327,908	269,721,036	32,327,829	159,363,288	461,412,153	....	433,727,424	....	....	....	1,387	1,060	150	541	1,227	519
Monthly averages	....	....	....	138 19	20 20	210 42	107,544	14,086	163,954	24,520,094	6,465,565	79,681,644	41,946,557	....	39,429,766	94.9	5	9	126	278	13	711	111	956
Daily averages	....	....	....	10 56	7 49	19 09	8,511	5,418	14,905	1,940,439	2,486,756	7,243,785	2,651,794	....	2,492,686	....	....	....	7	1,948		1,842	7	106

SCHEDULE No. 3.

STATEMENT OF WATER PUMPED BY ENGINES NOS. 4 AND 5 FOR THE YEAR 1899.

Month.	No. of Days on which Engines were working.		Number of Hours working each Month.		Number of Strokes made by Engines each Month.		Quantity of Water Pump'd each Month by each Engine—Imperial Gallons—Gross.		Total Quantity Pumped by Nos. 4 & 5 Engines. Imp. Gallons Gross.	Percentage of Slip.	Total Quantity Pumped. Imp. Gallons Net.	Average Pressure on Pumps.	Average Lift by Engines.	Total Quantity of Coal used under Boilers each Month.	Coal Consumed for Banking Fires.	Coal Consumed while Pumping.
	No. 4.	No. 5.	No. 4.	No. 5.	No. 4.	No. 5.	No. 4.	No. 5.								
			h. m.	h. m.								Pounds.	Ft. In.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.
January	31	31	738 30	734 45	1,524,252	1,585,674	321,617,172	332,991,540	654,608,712	2	641,516,538	95.7	19 8	911 1,230	56 1,142	855 088
February	28	28	666 25	666 00	1,404,519	1,479,860	296,353,509	310,770,600	607,124,109	2	594,981,627	95.0	21 2	819 1,180	53 858	766 322
March	31	31	730 30	736 15	1,505,416	1,588,836	317,642,776	333,655,560	651,298,336	2	638,272,369	95.5	19 5	905 1,115	62 000	843 1,115
April	30	29	715 05	653 05	1,425,122	1,367,743	300,700,742	287,226,030	587,926,772	2	576,168,237	92.5	18 9	860 1,420	60 1,500	799 1,920
May	31	31	711 30	732 45	1,459,827	1,562,625	308,023,497	328,151,250	636,174,747	2	623,451,252	96.2	18 10	902 1,680	23 500	879 1,180
June	30	30	712 25	709 05	1,518,581	1,557,977	320,420,591	327,175,170	647,595,761	2	634,643,846	95.5	22 10	915 880	22 1,000	892 1,880
July	31	31	734 15	726 30	1,574,405	1,632,399	332,199,455	342,803,790	675,003,245	2	661,503,180	95.6	23 6	1,037 1,070	23 500	1,014 570
August	31	31	735 35	733 45	1,609,917	1,668,199	339,692,487	350,321,790	690,014,277	2	676,213,991	95.1	24 3	1,028 1,910	23 500	1,005 1,410
September	30	30	706 15	708 50	1,525,406	1,593,368	321,860,666	334,607,280	656,467,946	2	643,338,588	95.7	23 8	1,002 80	26 000	976 80
October	31	30	724 35	673 20	1,519,406	1,462,064	320,594,666	307,033 440	627,628,106	2	615,075,544	93.1	22 9	930 000	52 674	877 1,926
November	30	30	712 40	706 45	1,426,638	1,488,153	301,020,618	312,512,130	613,532,748	2	601,262,093	95.2	23 9	930 1,240	53 1,144	877 096
December	31	18	712 00	378 15	1,528,219	817,242	322,454,209	171,620,820	494,075,029	2	484,193,528	75.0	18 8	708 1,470	55 713	653 757
Totals	365	350	8,600 15	8,159 20	18,021,708	17,804,140	3,802,580,388	3,738,869,400	7,541,449,788	....	7,390,620,793	1119.5	257 0	10,953 1,875	512 531	10,441 1,344
Monthly Averages	30.41	29.16	716 41	679 56	1,501,809	1,483,678	316,881,699	311,572,450	628,454,149	....	615,885,066	93.3	21 5	912 1,656	42 1,377	870 279
Daily Averages	.....	.....	23 33	23 19	49,374	50,869	10,418,028	10,682,484	21,094,964	....	20,673,065	.....	.....	30 1,280	1 865	29 415

SCHEDULE No. 4.

RECORD OF WATER RE-PUMPED AT HIGH LEVEL STATION FOR THE YEAR 1899.

Month.	Number of Hours Engines working.		Number of Revolutions made by Pumps.		Quantity of Water Re-pumped.		Total Quantity of Water Re-pumped by both Engines in Imp Gallons Gross.	Percentage of Slip.	Total Quantity of Water Re-pumped Imp. Gallons Net.	Average Pressure on Force Mains.	Average Pressure on Suction Mains.	Total Quantity of Coal Consumed under Boilers.		Coal Consumed for Banking Fires, Raising Steam, etc.		Coal Consumed while Pumping.	
	No. 1.	No. 2.	No. 1.	No. 2.	No. 1.	No. 2.											
	h. m	h. m.										Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
January	526 10	495 05	1,067,071	1,294,399	48,551,730 5	58,895,154.5	107,446,885	1	106,372,416	52.62	13.21	131	700	11	400	120	300
February	476 00	448 00	970,535	1,230,324	44,159,342.5	55,979,742	100,139,084.5	1	99,137,693.5	52.52	12.72	108	290	10	1,000	97	1,290
March	525 30	496 28	1,024,795	1,304,577	46,628,172.5	59,358,253.5	105,986,426	1	104,926,562	52.92	15.20	112	780	10	1,700	101	1,080
April	509 45	477 00	917,841	1,336,931	41,761,765.5	60,830,360.5	102,592,126	1	101,566,205	52.83	15.93	118	280	10	1,700	107	580
May	520 30	514 30	892,864	1,488,582	40,625,312	67,730,481	108,355,793	1	107,272,235	53.48	18.99	85	900	11	1,100	73	1,800
June	507 00	483 00	896,995	1,451,632	40,813,272.5	66,049,256	106,862,528.5	1	105,793,903.5	54 27	17.37	94	820	10	1,700	83	1,120
July	527 00	496 00	948,837	1,513,633	43,172,083.5	68,870,301.5	112,042,385	1	110,921,961	54.46	17.43	116	590	11	925	104	1,665
August	527 00	496 00	949,186	1,551,022	43,187,963	70,571,501	113,759,464	1	112,621,869	54.67	15.73	101	690	10	1,700	90	990
September	510 00	479 00	824,043	1,404,812	37,493,956.5	63,918,946	101,412,902.5	1	100,398,773.5	54.49	16.96	114	1,460	10	1,700	103	1,760
October	527 00	496 00	817,927	1,479,734	37,215,678.5	67,327,897	104,543,575.5	1	103,498,139.5	54.62	17.41	107	1,000	11	400	96	600
November	509 30	479 30	739,939	1,460,414	33,667,224.5	66,448,837	100,116,061.5	1	99,114,900.5	54.58	14.96	105	1,390	10	1,700	94	1,690
December	527 00	492 30	745,402	1,573,709	33,915,791	71,603,759.5	105,519,550 5	1	104,464,355.5	54.63	17.34	135	1,240	11	400	124	840
Totals	6,192 25	5,853 03	10,795,435	17,089,769	491,192,292.5	777,584,489.5	1,268,776,782	1	1,256,089,014	.....	.....	1,331	110	132	425	1,198	1,715
Monthly Averages	516 02	487 45	899,619	1,424,147	40,932,691	64,798,707	105,731,397	....	104,674,084	53.81	16.10	110	1,845	11	35	99	1,809
Daily Averages	16 11	16 02	29,576	46,821	1,345,732	2,130,368	3,476,100	....	3,441,339	53.81	16.10	3	1,293	....	724	3	569

COMPARATIVE STATEMENT OF COAL CONSUMED AND WATER PUMPED BY MONTHS FOR [illegible]

MONTH.	1898. Engine No.	1898. Water. Quantity Pumped.	1898. Water. Total Quantity Pumped.	1898. Coal. Quantity Consumed.	1898. Coal. Total Consumption.	1899. Engine No.	1899. Water. Quantity Pumped.	1899. Water. Total Quantity Pumped.	1899. Coal. Quantity Consumed.	1899. Coal. Total Consumption.
		Imp.Gals. Net.	Imp.Gals. Net.	Tons. Lbs.	Tons. Lbs.		Imp.Gals. Net.	Imp.Gals. Net.	Tons. Lbs.	Tons. Lbs.
January	1, 2 and 3	3,449,092		5 440		1, 2 and 3			48 1,430	
	4 and 5	550,310,866		768 120		4 and 5	641,516,538		911 1,250	
			553,759,958		773 560			641,516,538		960 660
February	1, 2 and 3			11 50		1, 2 and 3	57,311,740		204 470	
	4 and 5	519,118,891		707 280		4 and 5	594,981,627		819 1,180	
			519,118,891		718 330			652,293,367		1,023 1,650
March	1, 2 and 3	16,993,199		55 120		1, 2 and 3	5,098,887		21 1,120	
	4 and 5	537,543,349		749 20		4 and 5	638,272,369		905 1,115	
			554,536,548		804 140			643,371,256		927 235
April	1, 2 and 3	3,209,631		18 290		1, 2 and 3	20,936,901		72 610	
	4 and 5	554,665,737		782 1,275		4 and 5	576,168,237		860 1,420	
			557,875,368		800 1,565			597,105,138		933 30
May	1, 2 and 3	157,446,009		468 1,290		1, 2 and 3	3,383,899		19 1,590	
	4 and 5	424,943,402		593 150		4 and 5	623,451,252		902 1,680	
			582,389,411		1,061 1,440			626,835,151		922 1,270
June	1, 2 and 3					1, 2 and 3	9,764,205		43 20	
	4 and 5	580,402,976		757 360		4 and 5	634,643,846		915 880	
			580,402,976		757 360			644,408,051		958 900
July	1, 2 and 3	37,299,824		153 690		1, 2 and 3	43,359,079		131 380	
	4 and 5	631,554,167		834 60		4 and 5	661,503,180		1,037 1,070	
			668,853,991		987 750			704,862,259		1,168 1,450
August	1, 2 and 3	41,267,316		147 780		1, 2 and 3	49,081,437		185 750	
	4 and 5	614,523,874		848 740		4 and 5	676,213,991		1,028 1,910	
			655,791,190		995 1,520			725,295,428		1,214 660
September	1, 2 and 3	36,547,273		135 10		1, 2 and 3	21,209,936		59 490	
	4 and 5	587,060,760		806 460		4 and 5	643,338,588		1,002 80	
			623,608,033		941 470			664,548,524		1,061 570
October	1, 2 and 3	58,507,876		216 710		1, 2 and 3	17,012,113		35 30	
	4 and 5	557,093,785		788 850		4 and 5	615,075,544		930 600	
			615,601,661		1,004 1,560			632,087,657		965 630
November	1, 2 and 3	172,216,675		474 720		1, 2 and 3	30,311,410		114 1,680	
	4 and 5	425,857,097		598 1,550		4 and 5	601,262,093		930 1,240	
			598,073,772		1,073 270			631,573,503		1,045 920
December	1, 2 and 3	149,204,463		434 145		1, 2 and 3	176,257,817		452 430	
	4 and 5	477,117,840		698 1,035		4 and 5	484,193,528		708 1,470	
			626,322,303		1,132 1,180			660,451,345		1,160 1,960
Totals			7,136,334,102		11,653 147			7,824,348,217	12,341 937	12,341 935
Daily average			19,551,000		30 53			21,436,569		33 1,624

SCHEDULE No. 6.

COMPARATIVE STATEMENT SHOWING NUMBER OF GALLONS PUMPED, QUANTITY AND COST OF FUEL, ETC., FROM 1876 TO 1899, INCLUSIVE.

YEAR.	Total Water Pumped — Imp. Gals.	Quantity of Fuel. Lbs.	Total Cost of Fuel.	Average Daily Quantity of Water Pumped — Imp. Gals.	Average Daily Consumption of Coal. Lbs.	Water Pumped per Pound of Fuel. — Imp. Gals.
			$ c.			
1876	1,625,139,876	6,998,282	19,645 75	4,451,202	19,093	232.55
1877	2,633,433,932	10,407,992	25,556 29	7,214,887	28,515	253.02
1878	1,417,370,918	8,120,000	15,196 20	3,883,208	22,246	174.55
1879	1,610,104,542	10,872,211	19,313 07	4,411,245	29,787	148.09
1880	1,785,859,706	11,694,808	28,455 72	4,879,422	31,953	152.17
1881	1,910,430,419	12,391,874	31,410 04	5,234,056	33,950	154.18
1882	2,108,933,115	11,685,556	30,170 64	5,777,899	32,015	180.47
1883	2,809,965,484	17,266,679	43,529 08	7,698,511	47,306	162.74
1884	3,645,442,082	19,920,782	52,525 56	9,960,224	54,428	183.00
1885	3,537,482,598	18,644,465	46,589 27	9,691,733	51,081	189.73
1886	4,134,376,998	19,285,371	41,979 32	11,327,060	52,837	214.37
1887	4,417,938,169	23,283,900	50,051 85	12,103,940	63,791	189.74
1888	4,041,964,514	20,457,935	46,600 77	11,073,875	56,049	197.57
1889	4,148,781,634	19,231,940	44,135 10	11,366,525	52,690	215.72
1890	5,249,760,226	34,615,830	55,239 99	14,382,904	67,536	212.96
1891	6,207,656,403	29,300,240	60,012 77	17,007,275	80,291	211.86
1892	6,659,925,650	34,505,875	71,805 25	18,246,371	94,278	193.00
1893	6,646,021,488	26,013,840	64,702 86	18,208,278	71,270	255.47
1894	6,589,492,142	26,822,145	54,902 85	18,053,403	73,485	245.67*
1895	6,639,680,218	21,178,879	40,221 85	18,190,902	58,024	313.5
1896	6,781,187,980	18,606,598	25,307 90	18,527,836	50,837	364.4
1897	6,723,757,030	20,711,259	26,880 50	18,421,253	56,743	324.64
1898	7,136,334,102	22,100,145	27,572 00	19,551,600	60,548	322.91
1899	7,824,348,217	24,682,935	26,684 57	21,436,569	67,624	316.99

* A larger percentage was allowed for slip in 1894 and 1895, than in other years.

SCHEDULE No. 7.

QUANTITY OF WATER PUMPED AND QUANTITY CONSUMED DURING EACH MONTH OF 1899, WITH AMOUNT OF DAILY CONSUMPTION.

Month.	Total Quantity Pumped per Month in Imperial Gallons	Quantity Stored in Reservoir at end of each Month. Imperial Gallons	Quantity Consumed during each Month. Imperial Gallons	Average Daily Consumption of Water. Imperial Gallons	Average Daily Consumption of Coal at Main Pumping Station	
					Tons.	Lbs.
Stored in Reservoir on 31st December, 1898	.....	20,005,423	.....	.....	.....	
January	641,516,538	20,395,868	641,126,093	20,681,487	30	1,957
February	652,293,367	23,794,967	648,894,268	23,174,795	36	1,130
March	643,371,256	26,250,614	640,915,609	20,674,697	29	1,814
April	597,105,138	24,404,797	598,950,955	19,965,032	31	201
May	626,835,151	26,250,614	624,989,334	20,160,946	29	1,525
June	644,408,051	22,981,860	647,676,805	21,589,226	31	1,896
July	704,862,259	23,998,244	703,845,875	22,704,705	37	1,401
August	725,275,428	16,527,162	732,766,510	23,637,629	39	344
September	664,548,524	25,835,897	655,239,789	21,841,326	35	752
October	632,087,658	26,665,331	631,258,223	20,363,168	31	278
November	631,573,505	26,250,614	631,988,222	21,066,274	34	1,697
December	660,451,345	26,872,689	659,829,270	21,284,815	37	902
Totals	7,824,348,217	.....	.....	.....	405	1,897
Averages	652,029,018	.....	.....	21,428,675	33	1,658

SCHEDULE No. 8.

COMPARATIVE STATEMENT SHOWING INCREASE OF DEPARTMENT YEARLY, 1875 TO 1899 INCLUSIVE.

YEAR.	Average Daily Consumption of Water.	Population.	Average Daily Consumption of Water per Capita for all Purposes.	Total Number of House Services in use in each year.	Number of House Services put in each year.	Total Number of Hoists in use in each year.	Total Number of Meters in use each year.	Total Number of Miles of Mains in use each year.	Average Pressure on Pumps.				
									No. 1, Worthington Engine.	No. 2, Worthington Engine.	No. 3, Inglis & Hunter.	No. 4, Blake Engine.	No. 5, Blake Engine.
			Gallons.					Miles.					
1875	3,424,000	68,678	49.86	2,769	842	.....	.....	49.810	88.10	.....	.....	.....	.....
1876	4,451,202	71,693	62.09	3,512	740	.....	.....	80.250	88.78	97.51	.....	.....	.....
1877	2,812,000	67,386	41.74	4,518	1,006	.....	.....	107.570	83.33	97.69	.....	.....	.....
1878	3,883,208	70,867	54.79	6,707	2,189	28	.....	110.240	89.65	96.64	.....	.....	.....
1879	4,411,245	73,813	59.76	8,568	1,861	47	.....	111.290	95.28	99.04	.....	.....	.....
1880	4,879,422	75,110	64.96	9,582	1,014	66	.....	113.312	98.22	99.52	.....	.....	.....
1881	5,234,056	76,934	68.03	12,236	2,654	79	.....	115.518	96.32	100.78	.....	.....	.....
1882	5,777,899	81,372	71.01	14,062	1,826	94	.....	116.145	94.85	101.66	.....	.....	.....
1883	7,698,511	91,796	83.87	16,276	1,766 448	109	.....	131.352	94.27	106.49	.....	.....	.....
1884	9,960,224	105,211	94.66	18,363	2,087	130	.....	138.301	99.146	107.036	.....	.....	.....
1885	9,706,127	111,800	86.82	20,707	2,344	140	195	143.257	98.84	106.45	103.88	.....	.....
1886	11,344,337	118,403	95.81	23,643	2,936	152	256	156.042	104.88	104.92	104.67	.....	.....
1887	12,060,616	126,169	95.59	26,893	3,315	176	332	165.894	.....	.....	.....	.....	.....
1888	11,069,784	166,809	66.36	29,883	3,055	174	897	182.625	93.41	92.36	94.57	.....	.....
1889	11,378,962	175,000	65.02	34,056	3,288	222	1,347	212.832	94.25	94.82	94.92	.....	.....
1890	14,434,722	185,000	78.02	36,192	2,191	229	1,479	229.257	92.83	93.55	93.58	.....	.....
1891	17,007,275	188,904	90.03	38,250	2,111	230	1,544	237.967	93.33	93.66	93.91	.....	.....
1892	18,246,371	188,904	96.59	39,401	1,200	288	1,535	242.561	.....	.....	.....	.....	.....
1893	18,208,278	188,904	96.38	39,927	526	300	1,600	244.964	94.18	94.18	94.18	96.37	.....
1894	18,056,881	188,904	95.58	40,326	399	258	1,580	245.478	94.88	94.88	94.88	95.24	95.24
1895	18,192,063	190,000	95.74	40,683	357	.....	1,500	.....	94.88	94.88	94.88	95.05	95.05
1896	18,527,836	195,987	94.53	40,951	313	230	1,553	249.627	94.5	94.5	94.5	95.4	95.4
1897	18,378,722	195,987	93.77	41,315	364	230	1,553	252.646	95.1	95.1	95.1	95.7	95.7
1898	19,576,957	200,000	97.88	41,838	523	230	1,580	255.625	95.3	95.3	95.3	95.9	95.9
1899	21,436,569	225,000	95.27	42,552	714	230	1,598	257.613	94.9	94.9	94.9	95.3	95.3

SCHEDULE No. 9.

RECORD OF GAUGING AT ROSEHILL RESERVOIR FOR EACH MONTH OF 1899.

Month.	Elevation of Lowest Water Above Zero.	Elevation of Highest Water Above Zero.	Average Elevation Above Zero.	Average Depth in Reservoir.	Average Contents in Imperial Gallons.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	
January	210 5	212 2	211 4	15 4	21,388,013
February	205 3	212 7	209 11	13 11	18,057,170
March	212 4	213 10	213 5	17 5	26,457,972
April	211 5	214 0	213 0	17 0	25,421,180
May	212 11	214 4	213 6	17 6	26,665,331
June	211 3	214 5	213 1	17 1	25,628,538
July	211 6	213 9	212 8	16 8	24,608,074
August	209 3	214 1	211 11	15 11	22,782,630
September	210 0	214 7	213 0	17 0	25,421,180
October	210 4	214 4	213 2	17 2	25,835,897
November	.....	.....	.....	.....	.....
December	211 4	214 9	213 2	17 2	25,835,897
Averages	.....	.....	212 6	16 6	24,345,625

NOTE.—The returns for the month of November are omitted from this Schedule the Reservoir being empty for its annual cleaning.

The average depth of water in the Reservoir for the year (exclusive of November) was 16 ft. 8 in., equal to an elevation of 212 ft. 6 in. above zero.

SCHEDULE No. 11.

STATEMENT OF MAINS LAID DURING THE YEAR 1899.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
12-IN. MAINS:			
King west	South	From Simcoe St. to 23 ft. w. of Spadina Av.	2,553½
6-IN. SUB-MAINS:			
Atlantic Av	West	From Liberty St. 396 ft. south	464
Crescent Rd.	South	" Yonge St. to 441 ft. east	470
Cummings	South	" Bolton Ave. to 363 ft. east	387½
Gerrard (lane off)	West	" Gerrard St. n. to end of lane rear of Horticultural Gardens.	279½
Gladstone Av	West	" Lindsey St. 128 ft. n. to end	143
Havelock	West	" Hepburn St. 439 ft. n	439
Hepburn	North	" Havelock St. 34 ft. e. to old main	86
Peter	East	Across the intersection of King St	92
Scarth Rd	East	From 217 ft. n. of Crescent Rd. 345 ft. n.	355
Simpson Av	North	" Howland Rd. 306 ft. w	322
St. George	West	Extension south to 120 ft. s. of Bernard Av	377
"	West	" north from 300 ft. to 521 ft. n. of Lowther Ave.	221
Ulster	North	From Main on Bathurst St. to valve	10
Wright Av	North	" Roncesvalles Ave. 470 ft. e	483½
		Total	4,129½
4-IN SUB-MAINS:			
Bruce	North	From Givens St. to Shaw St	310
Danforth Av	South	" Jones Ave. to Ross St	1,354
Exhibition Gr'ds		Extension to Machinery Hall	280
Hickory	West	From St. Patrick St. n. to lane	217
Hogarth Av	North	" 142 ft. e. of Broadview Ave. 724 ft. e.	724
Ulster	North	" Bathurst St. 154 ft. e. to 3-in. main.	154
		Total	3,039
3-IN. SUB-MAINS:			
Hickory	West	From end of 4-in. main to manhole B.O.	14½
2-IN. SERVICE MAINS:			
Chatham	North	From Ross St. 554 ft. e	580
Ross	East	" Danforth Ave. to Chatham St	335½
		Total	915½

THE FOLLOWING PIECE OF MAIN WAS TAKEN UP DURING THE YEAR 1899.

Street, Avenue, Etc.	Side of Street.	Location.	Feet.
8-IN. OLD FURNISS IRON: Peter Street		Across intersection of King St. w.	92

SUMMARY OF MAINS.

Mains throughout the City of all sizes and descriptions, including those on Streets, Government, Private and other Property, at the end of 1899.

Size.	Total length in feet in use at end of 1898.	Put in during 1899.	Taken out during 1899.	Total length in feet in use at end of 1899.
36-in. mains	2,780			2,780
30 "	11,292			11,292
24 "	27,779			27,779
20 "	3,953			3,953
12 "	243,829	2,553 ½		246,382½
10-in. sub-mains	14,195			14,195
8 " "	7,722			7,722
6 " "	975,610¾	4,129½		979,740¼
4 " "	40,501½	3,039		43,540½
3 " "	10,571½	14½		10,586
2-inch and 1-inch small mains	3,993	915½		4,908½
Old 8-inch iron mains	6,175		92	6,083
Old 8-inch cement mains	1,240			1,240
	1,349,641¾	10,652	92	1,360,201¾

Total length of mains of all sizes in use at end of 1899—1,360,201¾ feet, or 257.613 miles.

SCHEDULE No. 12.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1899.
NEW HYDRANTS PLACED IN POSITION.

Street, Avenue, Etc.	Side of Street.	Location.
3-Way Hydrants—		
Borden	West	7 ft. north of Vankoughnet Street.
Exhibition Gro'nds		North of Machinery Hall.
High Park	East	150 ft. north of Pavilion.
Horticultural Gardens, lane rear of Pavilion.	"	231½ ft. north of Gerrard Street.
King west	South	123 ft. west of John Street.
King west	"	134¼ ft. east of Dorset Street.
Simpson	North	292½ ft. west of Howland Road.
Sumach	West	10 ft. south of Winchester Street.
St. George	"	9 ft. south of Bernard Avenue.
2-Way Hydrants—		
Atlantic Ave	West	175 ft. south of Liberty Street.
Atlantic Ave	"	396 ft. south of Liberty Street.
Avenue Rd.	East	7 ft. north of McPherson Avenue.
Bernard Ave	South	10 ft. west of Avenue Road.
Birch Ave	North	3 ft. east of Gange Avenue.
Crescent Rd	South	15 ft. east of Yonge Street.
Cottingham	North	217 ft. west of Gange Avenue.
Gladstone Ave	West	126 ft. north of Lindsey Avenue.
Hogarth Ave.	North	862 ft. east of Broadview Avenue.
McMaster Ave	South	6 ft. west of Avenue Road.
Niagara	East	179 ft. north of Wellington Avenue.
Queen east	North	350 ft. east of Brooklyn Avenue.
Tranby Ave	"	13 ft. west of Avenue Road.
Wright Ave	"	450¼ ft. east of Roncesvalles Avenue.
Wright Ave	"	137 ft. east of Roncesvalles Avenue.
York	West	25 ft. north of Wellington Street.

3-WAY HYDRANTS REPLACING 2-WAY HYDRANTS ALREADY IN POSITION.

Aberdeen Ave	North	220 ft. east of Ontario Street.
Admiral Rd	East	560 ft. north of Lowther Avenue.
Amelia	South	S.-E. cor. of Parliament Street.
Augusta Ave	East	N.-E. cor. St. Patrick Street.
Bay	"	S.-E. cor. Queen Street west.
Bellevue Ave	West	Opposite College Street Fire Hall.
Breadalbane	South	S.-E. cor. St. Vincent Street.
Carlton	"	S.-W. cor. Sumach Street.
Church	West	N.-W. cor. Alexander Street.
Church	"	S.-W. cor. Gerrard Street.
Dundas	South	74 ft. west of St. Clarens Avenue opp. Fire Hall.
Esplanade	North	125 ft. west of Bay street.
Exhibition Gr'nds.		57 ft. south of Machinery Hall.
Front	South	335 ft. west of York Street.

SCHEDULE No. 12—*Continued.*

Street.	Side of Street.	Location.
Front	North	320 ft. west of Yonge Street.
Henry	West	S.-W. cor. College Street.
Henry	"	230 ft. north of Cecil Street.
King	South	170½ ft. east of Frederick Street.
Main Pump'g St'n.	"	S.-E. cor. New Engine House.
Main Pump'g St'n.	"	S.-W. cor. New Engine House.
Markham	West	183¼ ft. south of Lennox Street.
Markham	"	19 ft. north of Harbord Street.
New Fort	North	At N.-W. corner.
Parliament	East	50 ft. north of Front Street.
Queen west	North	115 ft. west of James Street.
Teraulay	East	S.-E. cor. of Alice Street.
York	West	47½ ft. north of Front Street.

THE FOLLOWING HYDRANTS HAVE BEEN REMOVED OFF THE STREETS DURING THE YEAR OF 1899.

Street, Avenue, etc.	Side of Street.	Location.
Massey	East	100 ft. south of King Street, 3 way.
Niagara	West	185 ft. north of Wellington Avenue.
Winchester	South	S.-W. cor. of Sumach Street.
York	East	68½ ft. north of Wellington Street.

SUMMARY OF HYDRANTS.

Number of Hydrants on streets at end of 1898		2,954
" " private and other property at end of 1898		83
		3,037
There were 4 Hydrants removed from off the streets and 27 2-way Hydrants replaced by 3-way Hydrants during 1899		31
		3,006
Number of additional Hydrants set on streets during 1899		25
The following 3-way Hydrants replaced 2-ways (already set on streets) during 1899		24
And on private and other property during 1899		3
Total number of Hydrants in use at end of 1899		3,058

The total number of new Hydrants placed during the year 1899 was, 3 3-way and 16 2-way Hydrants. Total, 25.

A number of the old 2-way Hydrants were replaced during the year with the new improved body 2-way Hydrants.

SCHEDULE No. 13.

STATEMENT OF VALVES PLACED IN POSITION DURING THE YEAR 1899, SHEWING SIZE, POSITION, ETC.

Street, Avenue, Etc.	Side of Street.	Location.
12-IN. STOP VALVES:		
King west	South	West line of Simcoe Street.
King west	"	East " John Street.
King	"	West " "
"	"	East " Peter Street.
"	"	West " "
"	"	East " Spadina Avenue.
"	"	West " "
6-IN. STOP VALVES:		
Atlantic Av.	West	South line of Liberty Street.
Crescent Rd	South	East " Yonge Street.
Cummings	"	East " Bolton Avenue.
Gerrard (lane off)	East	North " Gerrard Street (Pavilion fire main.)
Hepburn	North	East " Havelock Street.
John	West	North " King Street.
King	North	East " John Street.
"	"	West " "
Peter	East	North " King Street.
"	"	South " "
Sackville	"	North " Gerrard Street.
Simpson Av.	North	West " Howland Road.
St. George	West	South " Bernard Avenue.
Ulster	North	East " Bathurst Street.
Wright Av	"	East " Roncesvalles Avenue.
4-IN. STOP VALVES:		
Bruce	North	East line of Givens Street.
Danforth Av	South	East " Jones Avenue.
Hickory	West	North " St. Patrick Street.
3-IN. STOP VALVES:		
Hickory	West	At north end on B. O. to manhole.
Ulster	North	West line of Lippincott Street.

THE FOLLOWING STOP VALVE HAS BEEN TAKEN OUT DURING THE YEAR 1899.

Street, Avenue, Etc.	Side of Street.	Location.
9-IN. STOP VALVE:		
Peter Street	East	South line of King Street.

Summary of Valves on Streets at End of 1899.

Size and Description.	In use at end of 1898.	Put in during 1899.	Taken out during 1899.	Total at the end of 1899.
Stop Valves:				
36 inches	4	.....	.....	4
30 "	8	.....	.....	8
24 "	17	.....	.....	17
20 "	2	.....	.....	2
12 "	436	7	.....	443
10 "	7	.....	.....	7
9 "	7	.....	1	6
8 "	12	.....	.....	12
6 "	1,692	15	.....	1,707
4 "	63	3	.....	66
3 "	29	2	.....	31
Totals.....	2,277	27	1	2,303
Check Valves.				
36 inches	5	.....	.....	5
30 "	3	.....	.....	3
24 "	2	.....	.....	2
20 "	1	.....	.....	1
12 "	12	.....	.....	12
6 "	45	.....	.....	45
Totals.....	68	.....	.....	68

SCHEDULE No. 14.

STATEMENT OF HOUSE SERVICES LAID DURING 1899.

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Avenue Rd.	1	1	1	1	1	....	.....	.....
Atlantic Av.	.....	1	.....	.....	2	.....	.....	.....
Admiral Rd	.....	4	7	.....	.....	.....	.....	.....
Afton Av.	1	.....	.....	.....	.....	.....	.....	.....
Adelaide, west	4	.....	.....	1	.....	.....	.....	.....
Arthur	11	2	.....	.....	.....	.....	.....	.....
Anne	2	.....	.....	.....	.....	.....	.....	.....
Albany Av.	1	.....	.....	.....	.....	.....	.....	.....
Amelia	1	.....	.....	.....	.....	.....	.....	.....
Alexander	1	.....	.....	.....	.....	.....	.....	.....
Argyle	4	.....	.....	.....	.....	.....	.....	.....
Bathurst	3	6	1	1	2	.....	.....	.....
Bay	.....	.....	.....	1	1	.....	.....	.....
Berkeley	1	.....	.....	.....	.....	.....	1	2
Bloor, west	7	3	4	2	.....	.....	.....	.....
Brunswick Av	3	4	.....	.....	.....	.....	.....	.....
Bain Av	1	.....	.....	.....	.....	.....	.....	.....
Brock Av	2	.....	.....	.....	.....	.....	.....	.....
Blake	.....	1	.....	.....	.....	.....	.....	.....
Brookfield Av	3	.....	.....	.....	.....	.....	.....	.....
Bleeker	1	.....	.....	.....	.....	.....	.....	.....
Boustead Av.	1	.....	.....	.....	.....	.....	.....	.....
Buchanan	2	.....	.....	.....	.....	.....	1	.....
Baldwin	.....	1	.....	.....	.....	.....	.....	.....
Bedford Rd.	2	.....	3	.....	.....	.....	.....	.....
Breadalbane	1	.....	.....	.....	.....	.....	.....	.....
Broadview Av	4	2	.....	.....	.....	.....	.....	.....
Beatty Av.	.....	1	2	.....	.....	.....	.....	.....
Berryman	1	.....	.....	.....	.....	.....	.....	.....
Bernard Av	.....	2	.....	.....	.....	.....	.....	.....
Bowman	1	.....	.....	.....	.....	.....	.....	.....
Beau	.....	.....	1	.....	.....	.....	.....	.....
Bellwoods Av.	7	2	.....	.....	.....	.....	.....	.....
Bright	2	.....	.....	.....	.....	.....	.....	.....
Bismarck Av.	1	.....	.....	.....	.....	.....	.....	.....
Centre Av	1	.....	.....	.....	.....	.....	.....	.....
Clarke	1	.....	.....	.....	.....	.....	.....	.....
Cummings	1	....	.....	.....	.....	.....	.....	.....
Crescent Rd	1	5	3	.....	.....	.....	.....	.....
College.	3	1	2	.....	1	.....	.....	.....
Cowan Av.	3	6	.....	.....	.....	.....	.....	.....
Classic Av.	2	.....	.....	.....	.....	.....	.....	.....
Crawford	5	3	.....	1	1	.....	.....	.....
Church	.....	2	.....	.....	1	.....	.....	.....

HOUSE SERVICES LAID DURING 1899—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Chestnut	2		1					
Cawthra Sq	2	2						
Clinton	2							
Carlaw Av	1							
Cumberland	2							
Concord Av	3							
Cottingham	1							
Close Av	1							
Colborne								1
Camden	5							
Callender	1							
Claremont	2							
Clifford	1							
Chatham	6							
Chicora Av			2					
DeGrassi	1							
Dupont	2							
Dagmar	1							
Delaware Av	6	1						
Defoe	2							
Dowling Av	1		1					
Dufferin	2							
Dupont	1							
Dalhousie	1							
Dunn Av	2	1						
Dunbar Rd	2	1						
Davenport Rd	4	3			1			
Dovercourt Rd	2				1		1	
Don Improvement Rd'y			1					
Dundas	2		1					
Defries	1							
Danforth Av				1				
Dunn		2						
Devonshire Pl					1			
Empress Cres't	2	4						
Euclid Av	1							
Edith	2							
Esther	1							
Edwin Av	1							
Exhibition Grounds						1		
Esplanade, east					2			
Elizabeth	1							
Elmer Av	1							
Eastern Av	1							1
Elm	1							
Elm Grove Av		3						
Edward	1							
Front, west							2	

HOUSE SERVICES LAID DURING 1899—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Front, east							2	
Fuller	3							
Fenning	2							
Fern Av	1							
Foster Pl	1							
First Av	2							
Franklyn Av	1							
Gloucester					1			
Greenwoods Av	2							
Grant	3	1						
Gladstone Av	3							
Galley Av	1							
Glen Rd		3	2	1				
George	1							
Grafton Av	1							
Golden Av	1							
Gerrard, east	3							
Givens	1							
Grosvenor				1				
Grange Rd				1				
Havelock	5							
Howland Av	4	1						
Harvard Av	5	2						
Huxley	4							
Hamilton	2							
Howard	2							
Huron	2		2		1			
Homewood Av		1						
Hallam	1	1						
Harbord	1	2	2				1	
Hogarth Av	1		1					
Jameson Av		4	1					
Jones Av	1							
Jarvis		1					1	
King, east	3				1		1	1
King, west	7		1		1			1
Kew Beach		2						
Lisgar	1							
Lowther Av		1		1				
Lindsay Av	1							
Leslie	1							
Lane off Jordan								1
Lippincott	2							
Lewis	1							
Lansdowne Av	1							
Madison Av	3	4	4					
Markham	7	2						

House Services Laid During 1899—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Markham, north	1							
Mission Av	2	1						
Millstone Lane				1	1			
Manning Av	2							
Major	4							
Maple Av		2						
Macdonell Av	5	1						
Maynard Av	2							
Marshall	2							
Marion	4	5						
Melinda					1			
Munroe	1							
Murray			1					
Massey	1							
Mill	1							
Melville Av	1							
Moutray	1							
Morse	1							
Margueretta	1							
McCaul	4				1			
McMillan				1				
McMurrich				1				
Nelson				1				
North Lamport				1				
Niagara	1							
Ontario	5							
Ossington	5							
Oak	5	2						
Oxford	1							
O'Hara Av	1							
Palmerston Av	4							
Park Rd	4	1	1					
Pears Av	7							
Pearson Av	1							
Pearl	1			1				
Pembroke	2							
Portland	3				1			
Parliament	10		1					
Queen, east	5	1		1	1		2	
Queen, west	9	4						
Regent	1							
Roxboro'	3							
Richmond, west			1					
Robinson	1							
Roncesvalles Av	1	1						
Robert	2							
Simcoe	2							

House Services Laid During 1899—*Continued.*

Name of Street.	Side of Street.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Sumach	2							
Shanley Av			1					
Scarth Rd			4					
St. George	1		2					
South Drive			1					
Shaw	6	1	2		1			
Spencer Av	2							
Sherbourne		1		1				
Sorauren Av	7							
Sydenham	1							
Sully	4							
Sackville	3							
Seaton	3	1						
Spadina Av	2	1	5					1
Saulter	2							
St. Albans	2							
Sussex Av	1							
Scollard	1				1			
St. Helens Av					1			
Stewart	2							
Spruce	1							
Spencer Av	5							
Simpson Av	2							
Sear	1							
St. Patrick			1					
Tate	2							
Teraulay		1	1					
Tecumseth	1	1						
Tyndall Av	2	1						
Toronto							1	
Triller Av	1							
Vine	1							
Walmer Rd	4	1	1					
Walker Av		1						
Waverley Rd	5							
Wellesley Pl				1				
Wellington, west			1				1	1
Woodbine Av	2							
Wilson Av	2							
Wood	1							
Woodlawn Av			1					
Westmoreland Av	1							
Woolfrey Av	2							
West Marion	2							
William	3							
Wright Av		4	1					
William Av	1							
Wallace Av	2							

House Services Laid During 1899—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Yonge	3	3	1	1	.....	.....	.....	1
York	.....	.....	.....	1	.....	.....	1	1
Yarmouth Rd	1	.....	.....	.....	.....	.....	.....	.....
Yorkville Av	1	.....	1	.....	.....	.....	.....	....
Totals	430	123	70	23	26	1	15	11
Island Services.								
Clandeboy Av	.....	1	.....	.....	.....	.....	.....	.....
Cherokee Av	1	.....	.....	.....	.....	.....	.....	.....
Hanlan's Point	.....	1	.....	.....	.....	.....	.....	.....
Hooper Av	3	.....	.....	.....	1	.....	.....	.....
Lakeshore Av	4	.....	.....	.....	.....	.....	.....	.....
McLean's Lane	5	.....	.....	.....	.....	.....	.....	.....

Total number of Services, 715.

SCHEDULE 15.

Statement of House Services in Use to 31st December, 1899.

Total number of services in use previous to			1874	1,375
"		" laid during	1874	552
Number of new		" "	1875	842
"	renewed	" "	1875	24
"	new	" "	1876 (by permit)	141
"	renewed	" "	1876	12
"	new	" laid by Commission	1876	602
"	renewed	" "	1876	258
"	new	" "	1877	1,006
"	renewed	" "	1877	161
"	new	" laid by Corporation	1878	2,189
"	renewed	" "	1878	103
"	new	" "	1879	1,861
"	renewed	" "	1879	97
"	new	" "	1880	1,014
"	renewed	" "	1880	41
"	new	" "	1881	2,654
"	renewed	" "	1881	117
"	new	" "	1882	1,826
"	renewed	" "	1882	44
"	new	" "	1883	1,766
"	renewed	" "	1883	54
"	new	" "	1884	2,087
"	renewed	" "	1884	12
"	new	" "	1885	2,344
"	renewed	" "	1885	22
"	new	" "	1886	2,936
"	renewed	" "	1886	19
"	new	" "	1887	3,250
"	renewed	" "	1887	65
"	new	" "	1888	2,990
"	renewed	" "	1888	65
"	new	" "	1889	3,288
"	renewed	" "	1889	68
"	new	" "	1890	2,136
"	renewed	" "	1890	55
"	new	" "	1891	2,058
"	renewed	" "	1891	53
"	new	" "	1892	1,151
"	renewed	" "	1892	49
"	new	" "	1893	526
"	renewed	" "	1893	2

SCHEDULE No. 15—*Continued.*

Number of new services laid by Corporation 1894	390
" renewed " " 1894	11
" new " " 1895	319
" renewed " " 1895	28
" new " " 1896	291
" renewed " " 1896	45
" new " " 1897	474
" renewed " " 1897	29
" new " " 1898	504
" renewed " " 1898	32
" new " " 1899	664
" renewed " " 1899	35
New services in Yorkville at time of annexation	448
" Parkdale " "	885
	44,080
Total number services laid on Island	255
Total	44,335

SCHEDULE 16.

NUMBER AND SIZE OF SERVICES IN USE TO DECEMBER 31ST, 1899.

	¼-in.	⅜-in.	½-in.	⅝-in.	¾ in.	1-in.	1½-in.	2-in.	2½-in.	3-in.	4-in.	6-in.	Total.
Services laid previous to 1875*													1,927
New services laid, 1875			617	194	38	7	4	5		1			866
" " 1876			900	80	11	8	1	4	1	8			1,013
" " 1877			1,083	43	9	8		10		14			1,167
" " 1878	86	1,427	717	28	5	9		5		14	1		2,292
" " 1879		1,248	633	47	9	5		4		12			1,958
" " 1880		607	385	26	7	3		8		19			1,055
" " 1881		1,375	1,275	62	17	17		7		17	1		2,771
" " 1882		625	1,139	44	23	20		5		14			1,870
" " 1883		373	1,311	70	16	13		17		17	3		1,820
" " 1884		441	1,513	70	13	25		9		20	2		2,099
" " 1885		190	2,068	56	26	13		7		5		1	2,366
" " 1886		14	2,741	92	37	29		9		25		8	2,955
" " 1887		10	3,062	106	55	38		15		25		4	3,315
" " 1888			2,856	101	32	22		19		14	7	4	3,055
" " 1889			3,087	127	52	45		19		1	24	1	3,356
" " 1890			1,995	83	37	35		16			24	1	2,191
" " 1891			1,995	33	34	24		11			13	1	2,111
" " 1892			1,109	26	23	23		7			12		1,200
" " 1893			465	18	13	15		8			8	1	528
" " 1894			332	29	15	17		3			4	1	401
" " 1895			270	26	25	17		11			7	1	357
" " 1896			359	20	22	20		13			1	1	336
" " 1897			390	34	17	36		16			5	5	503
" " 1898			378	60	45	27		12		1	6	7	536
" " 1899			430	123	70	23		26		1	15	11	699
Totals	86	6,310	31,108	1,598	651	499	5	266	1	208	133	37	42,747
Total number services on Island													255
Laid by Yorkville previous to annexation													448
" Parkdale " "													885
Total number of services													44,335

SCHEDULE No. 17.

Meters Taken Off and Replaced During 1899.

Month.	⅜-inch.		½-inch.		⅝-inch.		¾-inch.		1-inch.		1½-inch.		2-inch.		3-inch.		4-inch.		5-inch.		6-inch.		Total.
	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off	On.	Off.	On.	Off.	On.	Off.	On.	
January	....	....	1	....	12	9	4	2	1	1	....	....	....	....	2	1	....	....	....	....	....	....	33
February	....	....	....	....	31	29	15	15	12	7	....	....	3	1	2	....	1	1	....	....	....	1	118
March	....	....	1	3	12	12	3	7	2	1	....	....	1	2	1	1	....	....	....	....	....	....	46
April	....	....	....	1	23	21	4	5	7	7	....	....	11	1	1	1	....	....	....	....	....	....	82
May	....	....	....	....	10	9	4	4	2	2	....	....	....	1	....	....	....	....	....	....	....	....	32
June	....	....	1	....	10	10	5	4	1	1	....	....	2	....	1	1	....	....	....	....	....	....	36
July	....	....	....	....	11	10	13	7	1	....	....	....	1	1	2	....	....	1	....	....	....	....	47
August	....	....	....	....	5	3	3	4	2	2	....	....	4	1	1	....	....	....	....	....	....	....	25
September	....	....	....	....	18	14	2	6	1	1	....	....	2	1	....	....	....	....	....	....	1	....	46
October	....	....	1	....	22	15	7	6	2	....	1	1	1	1	1	1	2	1	....	....	....	1	63
November	....	....	....	....	14	13	11	8	4	2	....	....	1	1	....	....	1	1	....	....	....	....	56
December	....	....	....	....	13	13	12	8	2	2	....	....	....	....	....	....	1	1	....	....	....	....	52
Totals	....	....	4	4	181	158	83	76	37	26	1	1	26	10	11	5	5	5	....	....	1	2	636

SCHEDULE No. 18.

Meters Repaired Without Removal From Services During 1899.

Month.	½-inch.	⅝-inch.	¾-inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	6-inch.	8-inch.	10-inch.	Totals.	New Boxes.	New Frames.	Frames and boxes repaired.
January...	1	10	5	15	....	9	9	3	4	....	....	56	9	2	.....
February..	..	4	7	5	2	7	7	3	1	....	....	36	1	1	1
March	1	6	8	9	...	12	5	4	6	....	....	51	3	4	.....
April	1	3	8	13	2	8	7	3	3	....	....	48	3	....	4
May	..	10	5	12	2	4	1	1	....	....	....	35	5	2	8
June.....	3	9	9	10	....	5	4	2	2	....	....	44	7	....	11
July	1	7	9	7	1	4	1	1	3	....	....	34	5	2	1
August....	..	5	4	9	....	4	3	....	2	....	....	27	4	....	3
September.	..	4	7	11	1	9	3	1	2	....	....	38	10	1	4
October...	..	9	18	15	2	7	3	....	1	....	....	55	10	1	4
November.	2	7	4	9	1	7	8	2	5	....	....	45	8	1	4
December..	1	7	11	10	....	5	8	3	....	1	....	46	6	1	2
Totals. .	10	81	95	125	11	81	59	23	29	1	....	515	71	15	42

SCHEDULE No. 19.

Size and Number of New Meters Placed During 1899.

½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	5-inch.	6-inch.	Total.
14	5	15	8	12	3	3	..	..	60

SCHEDULE No. 20.

RETURN OF TEMPERATURES OF WATER FOR YEAR 1899, TAKEN AT THE SHORE CRIB AND CITY HALL TAP.

Month.	Degrees Fahrenheit.					
	Shore Crib.			City Hall Tap.		
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January	38	33	36 5	39	34	37.
February	38	34	35.7	38	34	36.
March	36	34	34.6	36	34	35.
April	42	34	37.6	42	34	38.
May	44	39	41.	45	41	42.7
June	51	40	42.	50	42	44.9
July	56	41	44.7	55	44	48.8
August	66	41	53.5	66	44	55.7
September	70	41	52.7	69	46	53.3
October	54	41	50.	55	44	52.
November	52	41	47.	53	44	48.6
December	46	38	40.4	50	40	43.
Averages of the year	49.4	38.	42.9	49.8	40.	44 5

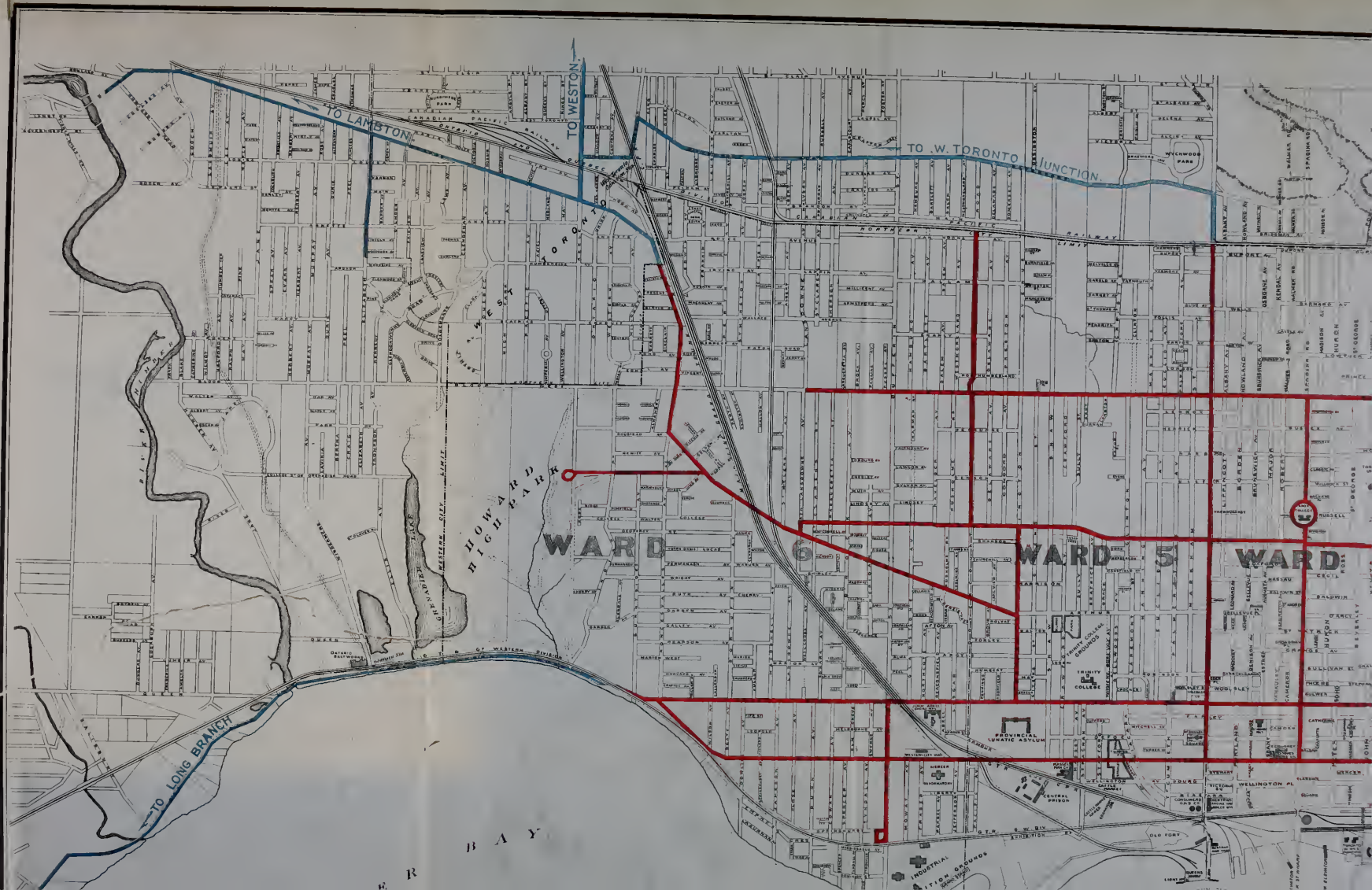
ANALYSIS OF TEMPERATURES.

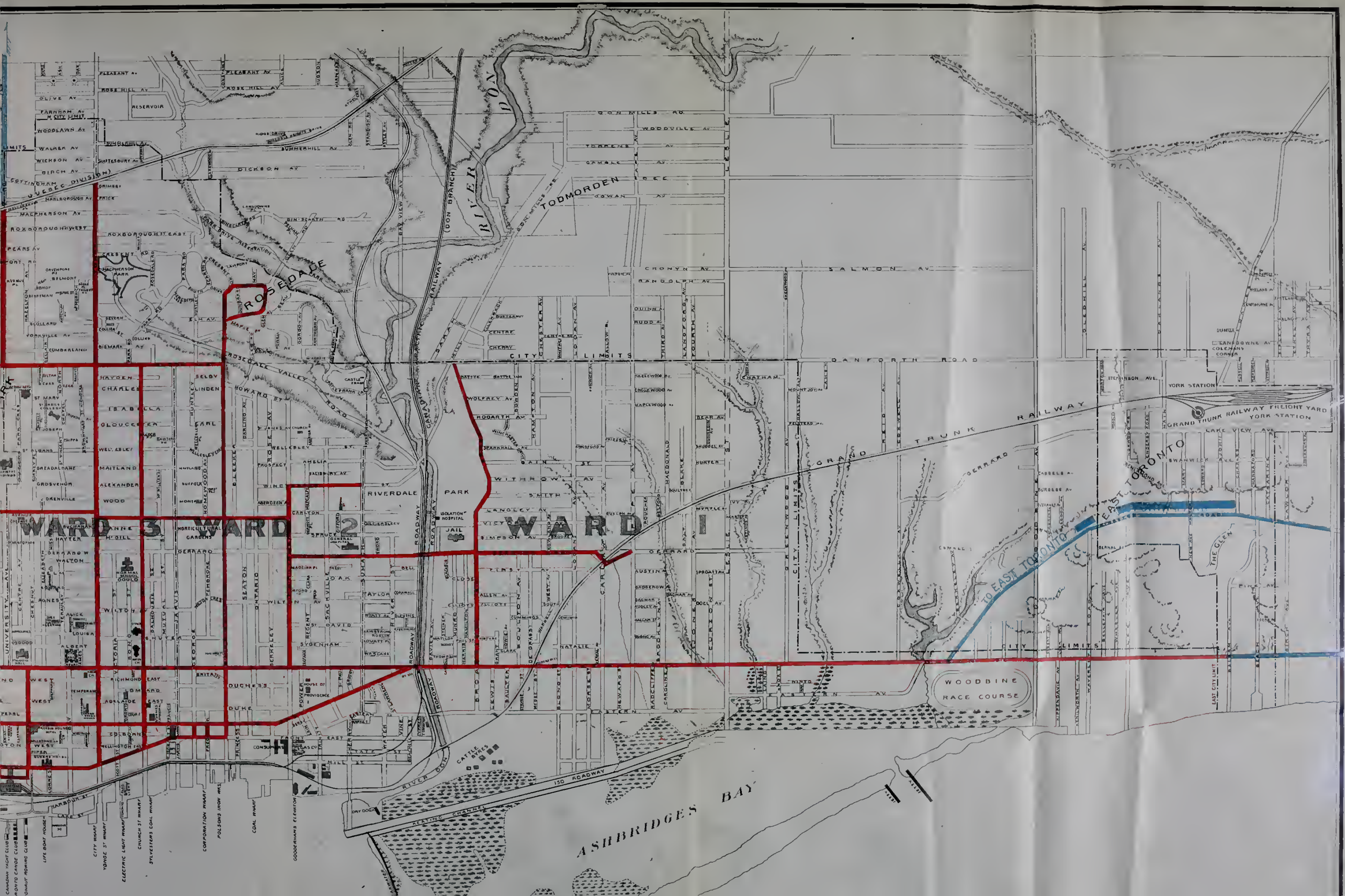
Shore Crib.

The highest, Sept. 2nd, 70 deg. The lowest, Jan. 12th, 33 deg.
The highest average in Aug., 53.5. The lowest average in March, 34.3.

City Hall Tap.

The highest, Sept. 2nd, 69 deg. The lowest, first 4 months, 34 deg.
The highest average in Aug., 55.7. The lowest average in March, 35.


TO LAMBTON
TO WESTON
TO W. TORONTO JUNCTION
TO LONG BRANCH
WARD 6
WARD 5
WARD
HOWARD PARK
HIGH PARK
B A Y


WARD 3
WARD 2
WARD 1
RIVER DON
DON (BRANCH)
GRAND TRUNK RAILWAY
TODMORDEN
ROSEDALE
ROSEDALE VALLEY ROAD
DANFORTH ROAD
CITY LIMITS
RIVERDALE PARK
ASHBRIDGES BAY
WOODBINE RACE COURSE
GRAND TRUNK RAILWAY FREIGHT YARD
YORK STATION
TO EAST TORONTO
EAST TORONTO
THE GLEN
DON MILLS RD.
GERRARD
PLEASANT AV
ROSE HILL AV
RESERVOIR
DICKSON AV
SUMMERHILL AV
WOODLAWN AV
WALMER AV
WICKSON AV
BIRCH AV
COTTINGHAM
MACPHERSON AV
ROXBOROUGH W.
ROXBOROUGH E.
PEARS AV
CRESCENT RD
BIN SCARTH RD
BAY VIEW AV
WINCHESTER
WOODVILLE AV
TORRENS AV
GAMBLE AV
COWAN AV
CRONYN AV
RANDOLPH AV
SALMON AV
QUINN AV
RUDD AV
CENTRE
CHERRY
LANGLEY
THIRD AV
FOURTH AV
FIFTH AV
SIXTH AV
SEVENTH AV
EIGHTH AV
NINTH AV
TENTH AV
ELEVENTH AV
CHATHAM
MOUNT JOY
HAZELWOOD AV
ENGLEWOOD AV
MAPLEWOOD AV
BEAR AV
WOLFREY AV
MOGARTH AV
BAIN ST
WITHROW AV
SMILEY
LANGLEY AV
SIMPSON AV
HUNTER
RUSSELL ST
MYRTLEY
IVY AV
AUSTIN
SPROAT AV
BADGEROW
DAGMAR
DUDLEY AV
DOCK AV
CALGAN ST
NATALIE
CUMMINGS
SOUTH
HOWARD ST
PROSPECT
AMELIA
SALISBURY AV
WINE
ABERDEEN
CARLTON
SPRUCE
GERRARD
OAK
TAYLOR
DAVID
REGENT ST
SYDENHAM
WILTON
WILTON AV
SHUTER
ISOLATION HOSPITAL
JAIL
GENERAL HOSPITAL
HORTICULTURAL GARDENS
MAITLAND
ALEXANDER
WOOD
GROSVENOR
GRENVILLE
HAYDEN
CHARLES
ISABELLA
GLOUCESTER
EARL
WELLESLEY
HUNTLEY
LINDEN
SELBY
HOWARD
BRITAIN
RICHMOND E.
RICHMOND W.
ADELAIDE E.
ADELAIDE W.
DUCHESS
DUKE
PRINCESS
SHERBOURN
SHERBOURN ST
WELLINGTON
FRONT
FRONT W.
HARBOUR ST
LAKE ST
CONSUMERS GAS
CHERRY ST WATER
CATTLE BYRES
DRY DOCK
150 ROADWAY
SLIPS
CANADIAN YACHT CLUB
TORONTO CANOE CLUB
LIFE BOAT HOUSE
CITY WHARF
YONGE ST WHARF
ELECTRIC LIGHT WHARF
CHURCH ST WHARF
SYLVESTERS COAL WHARF
CORPORATION WHARF
POLSONS IRON WKS
COAL WHARF
GOODERHAMS ELEVATOR
CITY LIMITS
EAST CITY LIMIT
LAKE VIEW AVE
SWANWICK AVE
STEPHENSON AVE
LANSDOWNE AV
COLEMANS CORNER
WALNUT AV
DIANOLA
PLAYTER
PLAYTER AV
CARLAW AV
DEGRASSI
DEGRASSI ST
PARLIAMENT
SACKVILLE
BOWDEN
HAMILTON
MACDONALD
BLAKE
BROADVIEW
CASTLE FRANK
CASTLE FRANK RD
BELMONT
BISHOP
BERRYMAN
HAZELTON AV
SCOLLARD
YORKVILLE AV
CUMBERLAND
BISMARK
DAVENPORT PL
AVENUE PL
MACPHERSON AV
ROSEDALE PARK DRIVE
ROSEDALE PARK
ROSEDALE DRIVE RESERVATION
CRESCENT
CRESCENT RD
PARK RD
SOUTH DRIVE
MEREDITH
SEVERN
COLLIER
ELM AV
MAPLE AV
GLEN AV
GORDON
MACKENZIE
BOND
BOND ST
HAZELTON
SCOLLARD
YORKVILLE
CUMBERLAND
BISMARK
PEARL
WEST
EAST
TEMPERANCE
ALBERT
LOUISA
ALICE
TENNESSEY
CHESTNUT
CENTRE AV
UNIVERSITY AVE
JARVIS
CHURCH
MUTUAL
VICTORIA
ONTARIO
SEATON
SHERBOURN
SHERBOURNE
CHARLEY
JONES
DUNDAS
QUEEN
KING
ST JOSEPH
ST MARY
ST MARYS COLLEGE
CARMEL
CHIPPS
ST ALBANS
ST VINCENT
BREADALBANE
GROSVENOR
ORENVILLE
SURREY PL
HOMEWOOD
HOMEWOOD AV
HUNTLEY
DARLING AV
ST JAMES AV CHURCH
WELLESLEY
PROSPECT
AMELIA
SALISBURY AV
HOWARD ST
ABERDEEN
CARLTON
SPRUCE
GERRARD
OAK
TAYLOR
DAVID
REGENT ST
SYDENHAM
WILTON
WILTON AV
SHUTER
ISOLATION HOSPITAL
JAIL
GENERAL HOSPITAL
HORTICULTURAL GARDENS
MAITLAND
ALEXANDER
WOOD
GROSVENOR
GRENVILLE
HAYDEN
CHARLES
ISABELLA
GLOUCESTER
EARL
WELLESLEY
HUNTLEY
LINDEN
SELBY
HOWARD
BRITAIN
RICHMOND E.
RICHMOND W.
ADELAIDE E.
ADELAIDE W.
DUCHESS
DUKE
PRINCESS
SHERBOURN
SHERBOURN ST
WELLINGTON
FRONT
FRONT W.
HARBOUR ST
LAKE ST
CONSUMERS GAS
CHERRY ST WATER
CATTLE BYRES
DRY DOCK
150 ROADWAY
SLIPS
CANADIAN YACHT CLUB
TORONTO CANOE CLUB
LIFE BOAT HOUSE
CITY WHARF
YONGE ST WHARF
ELECTRIC LIGHT WHARF
CHURCH ST WHARF
SYLVESTERS COAL WHARF
CORPORATION WHARF
POLSONS IRON WKS
COAL WHARF
GOODERHAMS ELEVATOR


TO LONG BRANCH
HUMBER BAY
PROVINCIAL LUNATIC ASYLUM
INDUSTRIAL EXHIBITION GROUNDS
OLD FORT
NEW FORT
WESTERN CHANNEL
HANLAN'S POINT
BLACKBURNE ISLAND
LONG POINT
PLAN
OF THE
CITY OF TORONTO
NOTE: THE RED LINES DENOTE TORONTO STREET RAILWAY.
BLUE SUBURBAN


WARD 4
WARD 3
WARD 2
WARD 1
WOODBINE RACE COURSE
ASHBRIDGES BAY
PROPOSED STADIUM PARK
HARBOUR
LAKE ONTARIO
EASTERN CHANNEL
CITY ENGINEER'S OFFICE.
TORONTO, 1899.
C. A. Russ
CITY ENGINEER

APPENDIX "C."

TORONTO STREET RAILWAY AGREEMENT.

AGREEMENT

BETWEEN

The Corporation of the City of Toronto

AND

George W. Kiely, Wm. McKenzie, Henry A. Everett and C. C. Woodworth,

FOR TRANSFER OF TORONTO STREET RAILWAY.

[*Approved as to form, 1st September, 1891.*

C. W. R. Biggar,
City Solicitor.]

This Indenture made in triplicate the first day of September, one thousand eight hundred and ninety-one.

Between the Corporation of the City of Toronto, hereinafter called "the Corporation," of the first part, and

George Washington Kiely, of the City of Toronto, Esquire; William McKenzie, of the City of Toronto, contractor; Henry Azariah Everett, of the City of Cleveland, in the State of Ohio, Secretary of the East Cleveland Railway Company (Electric), and Chauncey Clark Woodworth, of the City of Rochester, in the State of New York, Esquire, hereinafter called "the Purchasers," of the second part.

1. Whereas by virtue of an Act of the Legislature of the Province of Ontario, being 52 Victoria, chapter 73, intituled "An Act respecting the City of Toronto," the Corporation of the City of Toronto was empowered, after having acquired the ownership of the railways of the Toronto Street Railway Company and all the real and personal property in connection with the working thereof, to sell, lease or otherwise dispose of the same to any one or more persons, firms or corporations on such terms and for such periods as might be agreed upon between the City and the said persons, firms or corporations.

2. And whereas under and by virtue of another Act of the said Legislature, being 53 Victoria, chapter 105, the said Corporation was empowered to proceed to arbitration, under the 18th Resolution of the Agreement therein referred to, in order to determine the value to be paid by the said Corporation to the Toronto Street Railway Company for the said railways and the said real and personal property.

3. And whereas the Corporation proceeded with the said arbitration, and an Award was duly made therein on the 13th day of April, A.D. 1891, whereby the said value was determined to be the sum of $1,453,788, inclusive of certain outstanding debentures charged upon the said undertaking to the amount of $600,000.

4. And whereas the Corporation paid into the High Court of Justice, Chancery Division, the amount of the said award, and acquired the said railways and property, and is now in possession and full enjoyment thereof.

5. And whereas the said Corporation resolved to sell the said railways and all the property so acquired by the City from the Toronto Street Railway Company, and also to dispose of the right to operate surface street railways in the City of

Toronto, as hereinafter mentioned, as more fully appears from the said Award and from the Conditions, Tender and By-law which are annexed to this agreement, and made part and parcel thereof.

6. And whereas the Corporation advertised for tenders for the purchase of the said railways, property and privilege, and the Purchasers (Kiely, McKenzie and Everett) tendered therefor, and their said tender was duly accepted by the said Corporation.

7. And whereas a By-law authorizing the execution of an agreement between the Corporation and said Purchasers, was duly passed by the said Corporation on the 27th of July, A. D., 1891, in pursuance whereof this agreement has been duly prepared and approved

8. And whereas the said Purchasers have associated with them the said Chauncey C. Woodworth as a partner in the said undertaking.

9. And whereas the value of the horses, cars, harness stock and other moveable property and effects referred to in the fifth paragraph of the said conditions, and payable in cash, has been settled for the purpose of this agreement at the sum of $475,000, and it has been agreed by and between the said parties that a first lien or charge shall be created by these presents upon all the property which is the subject of this agreement, and shall be held by the corporation thereon for the balance (namely, for the sum of $378,788 and interest) of the amount of the said Award, subject only to the charge created by the said debentures to the extent of $600,000 with interest.

10. Now this Indenture witnesseth that the said Corporation, in consideration of the said sum of $475,000, now paid by the Purchasers to the Corporation (the receipt whereof is hereby acknowledged), and of the premises, both by these presents, in pursuance of all the powers in that behalf enabling it so to do, sell, grant and assign to the Purchasers, their heirs, executors, administrators and assigns, all the said railways and property acquired by the Corporation from the Toronto Street Railway Company as aforesaid, under and in pursuance of the said Arbitration and Award, and also all the extensions, additions and renewals to the said railways and property, real and personal, made by the Corporation during its ownership of the railway, subject to the said outstanding debentures and to the said charge above referred to, and to all the conditions herein mentioned, *to have and to hold* to the Purchasers, their heirs, executors, administrators and assigns, to their sole and only use, subject as aforesaid.

11. And this Indenture further witnesseth that the Corporation for the consideration aforesaid, doth by these presents in pursuance of all the powers in that behalf enabling it so to do, grant unto the said Purchasers, their heirs, executors, administrators and assigns for a period of twenty years from the date of these presents (which period shall be renewed for a further term of ten years and no longer, in the event of legislation being obtained to enable this to be done, the said Corporation hereby undertaking at once, on request being made by the said purchasers, to aid in procuring the needed legislation to authorize such renewal for such further period of ten years) the exclusive right for the said period of twenty years and the said extended period of ten years, in the event of the said needed legislation being obtained, and no longer, upon the aforesaid conditions to operate surface street railways in the City of Toronto, excepting on the Island and on that portion (if any) of Yonge Street from Ontario and Quebec Railway tracks to the north City limits, over which the Metropolitan Street Railway Company claims an exclusive right to operate such railways, and the portion (if any) of Queen Street (Lake Shore Road) over which any exclusive right to operate surface street railways may have been granted by the Corporation of the County of York, and also the exclusive right for the same term to operate surface street railways over the said portions of Yonge Street and Queen Street West (Lake Shore Road) above indicated so far as the said Corporation can legally grant the same; but this clause and nothing contained in this agreement shall give or be construed

to mean or give to the Purchasers the power to engage in any other business than that of operating surface street railways, as herein permitted.

12. It is mutually understood, declared and agreed by and between the Corporation and its successors, and the purchasers, their heirs, executors, administrators and assigns, that the said Award, Conditions, Tender and By-law so attached hereto as aforesaid are incorporated with these presents and made part and parcel thereof, and the said parties mutually and respectively covenant, promise and agree with each other to carry into effect, observe, perform and fulfil all the provisions and stipulations therein contained and to be carried into effect, observed, performed and fulfilled by the said parties and their aforesaids respectively.

13. And the said Purchasers for themselves and each of them for himself and for their and each of their heirs, executors, administrators and assigns, covenant, promise and agree with the corporation, their successors and assigns, as follows: That they will fulfil all the conditions, stipulations and undertakings in this agreement contained, it being understood that the reference to particular matters to be performed by the Purchasers shall not diminish or limit the obligations of this agreement.

14. The said Purchasers and their aforesaids covenant as aforesaid with the said Corporation that they will pay to the said Corporation the said sum of $378,788, being the balance of the said award, in four equal quarterly payments on the first days of December, March, June and September next, or the first juridical day thereafter respectively, with interest at the rate of 5 per cent. per annum from the date of this agreement on the amount thereof then remaining unpaid.

15. And that they will yearly and every year during the term covered by this agreement pay to the Corporation, through its City Treasurer, the sum of $800 per annum per mile of single track, or $1,600 per mile of double track, occupied by the rails of the said railway, within the said limits (not including turnouts, the length of which are to be approved of by the City Engineer), in four equal quarterly instalments, on the first days of January, April, July and October in each year, or on the first juridical day thereafter, respectively, the first instalment to be the proportionate part of the quarterly instalment accruing from the date of these presents to the first day of October next.

16. And that they will monthly and every month during the term covered by this agreement on the first Monday of each month pay to the Corporation through its City Treasurer, the percentages in the said Conditions and Tender referred to, being the following percentages of the gross receipts from passenger fares, freight, express and mail rates, and all other sources of revenue derived from the traffic obtained by the operation of the said railways, namely:

On all gross receipts up to	$1,000,000	per annum,	8	per cent.
Between $1,000,000 and	1,500,000	"	10	"
" 1,500,000 "	2,000,000	"	12	"
" 2,000,000 "	3,000,000	"	15	"
All on all gross receipts over	3,000,000	"	20	"

17. And it is further understood, declared and agreed between the parties to these presents that should the Corporation within a reasonable time eliminate from Clause 31 of the said Conditions the provision requiring a class of tickets to be sold at the rate of eight tickets for twenty-five cents for use during certain specified hours of the day, then and in that event the said Purchasers, for themselves, their executors, administrators and assigns covenant, promise and agree with the Corporation and their successors that they will in accordance with their said tender in that behalf, pay to the Corporation and its successors during the unexpired period of the said term covered by this agreement two (2) per cent. of the said gross receipts in addition to the percentages hereinbefore mentioned, such additional percentage to be payable monthly as aforesaid.

18. The Purchasers in addition to the other considerations payable to the Corporation for the said Railways and property, shall pay to the Corporation the following items, viz :

(1) The actual cost to the Corporation of the extensions and additions to the tracks made by the Corporation since the acquisition thereof.

(2) The actual cost to the Corporation of additions to plant and materials for the use of said railway handed over to the Purchasers.

(3) The Actual cost to the Corporation of the new horses purchased since the railway has been acquired.

(4) One-half of the actual cost to the Corporation of the painting, renovating and other repairing done to the cars, plant and appliances of the railway since the acquisition thereof from the said Street Railway Company.

19. The Purchasers covenant that they will well and truly pay to the holders of said hereinbefore mentioned debentures as they mature the said sum of $600,000 thereby secured and interest thereon from the date of these presents, and will indemnify and save harmless the Corporation from all claims and demands in respect thereof.

20. That they will build and equip, or cause to be built and equipped, a car factory within the limits of the City of Toronto for the manufacture and repair of all the cars and railway plant used on the said railways, and will there continuously carry on, or cause to be carried on, such business and the manufacture and repair of all the said cars and railway plant during the term covered by this agreement, and that the performance of this clause may be specifically enforced by the order and injunction of the High Court of Justice.

21. And it is hereby agreed that all the said railway property liable to be assessed for school purposes shall be assessed for Public School purposes, and that the rates levied in respect thereof shall be payable to the Public School funds of the City of Toronto.

22. And it is further understood, declared and agreed between the said parties to these presents that the delivery over and acceptance of the said property shall not interfere with the rights of the parties under Clause 3 of the said Conditions, but that notwithstanding this Act, the Judge of the County Court of the County of York shall settle any difference that may arise between the parties in respect thereof, and the sum so settled by him shall be forthwith paid by the party liable to the party to whom the same is found due.

23. And it is further understood, declared and agreed by and between the said Corporation and the said Purchasers, that if the said Purchasers form a Joint Stock Company for the purpose of carrying this agreement into effect, then upon payment of the said sum of $378,788 and interest as aforesaid, the said Company shall, upon executing the necessary contract of substitution, be substituted for the said Purchasers, and the said Clause 23 of the said Conditions shall apply to such Company so to be formed as aforesaid, and shall cease to apply to the individual Purchasers, who shall thenceforward be discharged from all individual liability in the premises.

24. And it is further declared, covenanted and agreed by and between the parties of these presents that all the property the subject of this agreement is hereby charged with payment of all the moneys to be paid under this agreement as the purchase money of the said property.

25. And it is further covenanted and agreed by and between the parties to these presents, that the payment of the said gross percentages monthly, and mileage quarterly, and the fulfilment of the obligations of the said Conditions shall be a lien and charge on the said railways and the property used in the working thereof, both before and after the incorporation of the said Company, intended to be substituted as aforesaid in the place of the said Purchasers ; but this provision shall not interfere with the rights of such Purchasers or of the said Company, after the payment of the purchase moneys as aforesaid, to sell and dispose of any prop-

erty which is not required for the operation of the said railways. All the property, however, which replaces that which may be sold or disposed of is to be charged under this clause as the original property is now hereby charged, and all after acquired property is to be in the same manner charged for the fulfilment of the said obligation.

26. And it is further understood, covenanted and agreed by and between the parties to these presents that a sufficient supply of each of the classes of tickets mentioned in the said Conditions shall at all times be kept for sale and sold to all persons desirous of purchasing the same on all cars while running through the streets of the City, and also at the public offices of the Purchasers.

27. And it is further understood, declared and agreed by and between the said parties that in fixing the allowance to be made for horses which have been sold by the Corporation, and therefore not forthcoming under the provision in Clause 3 of the said Conditions, the Corporation shall only be liable to account for and pay the price realized on such sales.

28. And it is further understood, declared and agreed by and between the said parties that the system of accounts and bookkeeping to be adopted by the Purchasers shall be subject to the approval of the City Treasurer and the Auditors appointed by the City.

29. And it is further covenanted and agreed between the parties to these presents that all conveyances, assurances and instruments necessary to carry out fully these presents shall, from time to time, be executed by the parties hereto, the same to be settled by James S. Cartwright, Q.C., Registrar of the Queen's Bench Division of the High Court of Justice, in case the parties differ about the same.

30. All outstanding car fare tickets issued by the Corporation or by the Toronto Street Railway Company prior to the date hereof shall be accepted as fares by the Purchasers when presented by passengers on the conveyances of the said railway subsequent to the date hereof, and the Corporation agrees that upon such tickets being returned to it from time to time, it will pay to the Purchasers the same prices therefor for which such tickets were issued by the Corporation and the said Toronto Street Railway Company respectively.

In witness whereof the said Corporation has hereto affixed its Corporate Seal under the hand of Edward Frederick Clarke, Esquire, Mayor of the said City, and Richard Theodore Coady, Esquire, City Treasurer and Keeper of the said Seal, and the said Purchasers have set their respective hands and seal.

Signed, sealed and delivered in the presence of

THOMAS CASWELL.
GEORGE KAPELLE.

E. F. CLARKE, *Mayor.*
R. T. COADY, *Treasurer.*
G. W. KIELY.
WM. McKENZIE, by his Attorney, Nicol Kingsmill.
H. A. EVERETT.
C. C. WOODWORTH.

CITY SEAL.

[L.S.]

THE AWARD, CONDITIONS, TENDER AND BY-LAW.

REFERRED TO IN THE AGREEMENT HERETO ATTACHED, DATED THE FIRST DAY OF SEPTEMBER, A.D. 1891, BETWEEN THE CORPORATION OF THE CITY OF TORONTO AND GEORGE WASHINGTON KIELY, WILLIAM MCKENZIE, HENRY AZARIAH EVERETT AND CHAUNCEY CLARK WOODWORTH.

CONDITIONS OF SALE OF THE STREET RAILWAY FRANCHISE OF THE CITY OF TORONTO, AS ADOPTED BY THE CITY COUNCIL, MAY 5TH, 1891.

1. The privilege to be disposed of is the exclusive right (subject as hereinafter provided) to operate surface street railways in the City of Toronto—excepting on "the Island" and on that portion (if any) of Yonge Street, from the Ontario and Quebec railway tracks to the north City limits, over which the Metropolitan Street Railway Company claims an exclusive right to operate such railways, and the portion (if any) of Queen Street West (Lake Shore Road) over which any exclusive righ t to operate surface street railways may have been granted by the Corporation of the County of York—for a period of twenty years, which shall be renewed for a further period of ten years in the event of legislation being obtained to enable this to be done; and the City will assist in endeavoring to secure such legislation.

(*a*) Over those portions of Yonge Street and Queen Street West (Lake Shore Road) above indicated, the purchaser shall have an exclusive right to operate surface street railways, so far as the City can legally grant the same.

2. The party whose tender is accepted (and who is herein called "the purchaser") must take over all the property to be acquired by the City from the Toronto Street Railway Company, as it stands on the date of the acceptance of the tender, including the rails, points and substructures of all tracks now laid, real estate, buildings, shops, rolling stock, horses machinery, stock and all other articles covered by the award of the Board of Arbitrators, at the amount of said award.

3. Particulars of the said property are set forth in the Schedule attached to the award of the said Board of Arbitrators; but the City will only undertake as to the tracks actually constructed and the real estate, buildings and shops that all the articles mentioned in said Schedule will be forthcoming.

(*a*) The City will convey and deliver to the purchaser and the purchaser shall take over and pay for all the property and effects (whether mentioned in said Schedule or otherwise) which the City acquires from the Toronto Street Railway Company under the said award, and if anything mentioned in said Schedule is not forthcoming, or if anything is acquired by the City, as aforesaid, which is not specified in said Schedule, the purchase money to be paid as herein provided shall be subject to such increase or abatement as may be agreed upon between the City and the purchaser, or (in case they fail to agee within ten days after acceptance of tender) as shall be fixed by the Judge or the County Court of the County of York, who is hereby appointed sole arbitrator for that purpose, with all the powers of arbitrators appointed under the sections of the Municipal Act relating to the appointment of arbitrators.

4. The purchaser must accept the title to the above properties which the City acquires or will acquire by virtue of the award of the arbitrators, and must search the same at his own expense, and the City is not to be bound to produce or show any documents or evidences of title except such as are in its possession or power.

5. The sum tendered for the above properties, except horses, cars, harness, stock, and other movable properties and effects (which are to be paid for in cash

at the time the contract is entered into) may either be paid in cash or secured to the satisfaction of the City Treasurer, and paid in four equal quarterly payments, counting from the date of contract and bearing interest at the rate of five per cent. per annum from May 16th 1891, till paid.

N. B.—There is outstanding $600,000 debentures issued under the authority of the Act 47 Viet. (Ont.) cap. 77, bearing interest at six per cent. per annum, payable half-yearly, and forming a charge upon the undertaking as in said Act is provided. These debentures do not mature until 1914. The purchaser takes the property subject to this charge, and also to certain existing mortgages amounting to about $40,000, and assumes payment of these with the interest accruing thereon from the date of purchase.

6. The purchaser shall not charge the undertaking with bonds or debentures for a longer period than the term of this contract, and must satisfy the City Treasurer that means are provided for meeting such obligations at maturity.

7. At the termination of this contract the City may (in the event of the Council so determining) take over all the real or personal property necessary to be used in connection with the working of the said railways, at a value to be determined by one or more arbitrators (not exceeding three) to be appointed as provided in the Municipal Act and the Acts respecting Arbitrations and References, and to have all the powers of arbitrators appointed under said Acts, and each party shall bear one-half of the cost of the necessary arbitration at conclusion of term of lease, but the City shall only pay for the land conveyed by them to the purchaser, what it is worth, without reference to its value for the purpose of operating a street railway or railways.

8. The City will construct, reconstruct and maintain in repair the street railway portion of the roadways, viz., for double track, 16 ft. 6 in., and for single track, 8 ft. 3 in., on all streets traversed by the railway system, but not the tracks and substructure required for the said railways.

9. The purchaser shall pay to the City Treasurer the sum of eight hundred dollars per annum per mile of single track (not including turn-outs), such sum or sums to be paid in four quarterly instalments as follows: January 1st, April 1st, July 1st and October 1st of each year, or on the first juridical day after each of the said days respectively, and shall also pay the City Treasurer monthly on the first Monday in each month per cent. of the gross receipts from passenger fares, freight, express and mail rates and all other sources of revenue derived from traffic obtained by operation of said street railway system. All books, accounts and vouchers kept by the purchaser shall be subject to monthly audit by auditors, to be appointed by the City Council, and all reasonable facilities for such audit shall be afforded by the purchaser.

Tracks, etc., and Roadways.

10. The purchaser shall maintain the ties, stringers, rails, turn-outs, curves, etc., in a state of thorough efficiency and to the satisfaction of the City Engineer, and shall remove, renew or replace the same, as circumstances may require, and as the City Engineer may direct. When a street upon which tracks are now laid is to be paved in a permanent manner, on concrete or other like foundation, then the purchaser shall remove present tracks and substructures and replace the same, according to the best modern practice, by improved rails, points and substructures of such description as may be determined upon by the City Engineer as most suitable for the purpose, and for the comfortable and safe use of the highway by those using vehicles thereon; and all changes in the present rails, tracks and road-bed, construction of new lines or additions to present ones, shall be done under the supervision of the City Engineer and to his satisfaction.

(*a*) In the event of the purchaser desiring to make any repairs or alterations to the ties, stringers, rails, turn-outs, curves, etc., on paved streets, the purchaser will re-pave the portion of the roadway so torn up at his own expense.

11. When the purchaser desires or is required to change any existing tracks and substructures for the purpose of operating by electric or other motive power approved by the City Engineer and confirmed by the City Council, the City will lay down a permanent pavement in conjunction therewith upon the track allowance (as herein defined) to be occupied by such new tracks and substructures. This shall first apply only to existing main lines, and thereafter to branch lines or extensions of main lines and branches, as and when the City Engineer may from time to time recommend and the City Council may direct and require ; but such tracks as are now laid on a permanently formed roadway must, when so required as aforesaid, be changed by the purchaser as hereinbefore provided, without any change of roadbed being made or any expense occasioned to the City thereby.

12. The gauge of the system (4 ft. 11 in.) is to be maintained on main lines and extensions thereof, and branch lines and extensions thereof ; and the location of the railway on any street shall not be made by the purchaser or confirmed by the City Council until plans thereof, showing the proposed position of the rails, the styles of rail to be used, and the other works in each such street, have been submitted to, and approved in writing by, the City Engineer.

13. The tracks shall conform to the grades of the streets upon which they are respectively laid, and the purchaser shall not in any way change or alter the same without the written permission of the City Engineer.

14. The purchaser will be required to establish and lay down new lines, and to extend the tracks and street car service on such streets as may be, from time to time, recommended by the City Engineer and approved by the City Council, within such period as may be fixed by By-law to be passed by a vote of two-thirds of all the members of said Council ; and all such extensions and new lines shall be regulated by the same terms and conditions as relate to the existing system, and the right to operate the same shall terminate at the expiration of the term of this contract.

15. No new lines or extensions of existing lines shall be opened for traffic until the purchaser has obtained a certificate in writing from the City Engineer that the same have been constructed to his satisfaction.

16. The purchaser shall not extend any lines of the said railways beyond the limits of the City, or acquire, own, control or operate a line or lines connecting or in conjunction with or adjoining a City line or lines forming practically prolongation thereof, without first having had the plans of the same [as to position, elevation and gradients on the highway or crossings or highways, or until an agreement has been entered into whereby such suburban line or lines will be altered (at purchaser's expense) to conform to the grades established by the City when the streets or routes become City property or within its limits], approved, in writing, by the City Engineer and confirmed by the City Council.

17. In case the purchaser fails to establish and lay down any new line, as aforesaid, and to open the same for traffic, or to extend the tracks and services on any street or streets within such period as may be fixed by By-laws of the City Council, to be passed as herein provided, the privilege of laying down such new lines or extensions on the street or portion of street so abandoned by the purchaser, may be granted by the said Council to any other person or company, and the purchaser shall in such case have no claim against the City for compensation.

18. The City shall have the right to take up and replace the streets traversed by the railway lines for the purpose of altering the grades thereof, constructing or repairing pavements, sewers, drains or conduits, or for laying down or repairing water or gas pipes, or for all other purposes within the powers of the Corporation, without being liable for any compensation or damage that may be occasioned to the working of the railway on the works connected therewith.

19. The privilege hereby granted is also subject to any existing rights (statutory or otherwise) or any other corporation which now has power to open or take up the streets of the City, such rights to be exercised with the permission and under the direction of the City Engineer.

20. The purchaser shall, within one year from the 16th day of May, 1891, discontinue the use of the buildings as stables on Scollard Street, and also the buildings on Yorkville Avenue.

21. The track allowances (as herein specified), whether for a single or double line, shall be kept free from snow and ice at the expense of the purchaser, so that the cars may be used continuously; but the purchaser shall not sprinkle salt or other material on said track allowances for the purpose of melting snow or ice thereon without the written permission of the City Engineer, and such permission shall in no case be given on lines where horse power is used.

22. If the fall of snow is less than six inches at any one time, the purchaser must remove the same from the tracks and spaces hereinafter defined, and shall, if the City Engineer so directs, evenly spread the snow on the adjoining portions of the roadway; but should the quantity of snow or ice, etc., at any time exceed six inches in depth, the whole space occupied as track allowances (viz., for double tracks, sixteen feet six inches, and for single tracks, eight feet three inches), shall, if the City Engineer so directs, be at once cleared of snow and ice, and the said material removed and deposited at such point or points on or off the street as may be ordered by the City Engineer.

23. If the purchaser becomes bankrupt or insolvent, or makes any assignment for the benefit of creditors, or becomes subject to the operation of any Winding-up Act, or allows an execution against his goods or lands to remain in the hands of the Sheriff of Toronto unsatisfied for more than ninety days, then and in any such case all the rails, stringers, ties, turn-outs, points, sidings, etc., shall become the property of the City without compensation to the purchaser.

24. Electric or other new system of motor, or a combined system, approved by the City Engineer, and confirmed by the City Council as suitable, shall be introduced within one year, and used upon such portions of the following streets, as may be required by the City Engineer and approved of by the Council within three years of the date of contract, viz: Queen Street from the eastern City limit to High Park (or as near thereto as the City may then have power to grant a right to operate a line on said street); King Street, from its intersection at Queen Street and River Don to intersection with Queen Street at Roncesvalles Avenue: Front Street, from Simcoe Street to Frederick Street; Yonge Street from Front Street to Ontario and Quebec Railway track; Frederick and George Streets, from Front to King Street; Sherbourne Street, from King Street to North Drive; Elm Avenue, from Sherbourne Street easterly to Glen Road; Spadina Avenue, from King Street to Bloor Street; Parliament Street, from Queen Street to Carlton Street; Gerrard Street, from Greenwoods Avenue to Parliament Street; Carlton Street, from Parliament Street to Yonge Street; College Street, from Yonge Street to Jameson Avenue, at intersection of Dundas Street; Dundas Street, from Queen Street to the bridge; Bloor Street, from Sherbourne Street to Roncesvalles Avenue; York Street, from Front Street to Queen Street; McCaul Street, from Queen Street to College Street; Bathurst Street, from King Street to the Canadian Pacific Railway tracks; and Broadview Avenue, from Queen Street to Danforth Avenue.

25. Until such changes are carried out in such a manner as will permit its disuse, horse power may be continued on branch and other lines, or parts of same, under written permit from the City Engineer, who shall have the right to order extra horse power to be employed on steep grades.

26. The speed and service necessary on each main line, part of same or branch, is to be determined by the City Engineer and approved by the City Council.

Day Cars.

27. Day cars are to commence running on all routes not later than 5.30 a. m., and to run until 12 o'clock midnight, at such intervals as the City Engineer with the approval of the City Council, may from time to time determine.

Night Cars.

28. Night cars shall be run on such routes and at such hours and intervals as may be deemed necessary by the City Engineer and approved by the City Council.

Tickets and Fares.

29. Single (cash) fares are to be five cents each.

30. Fares on night cars are to be double the ordinary maximum single fare rates.

31. A class of tickets must be sold at the rate of 8 for 25 cents, the same to be used only by passengers entering the cars between the time the day cars commence running and 8 a. m., and between 5 and 6.30 p. m.

A class of tickets must be sold at the rate of 25 for $1,

Another class at the rate 6 for 25 cents.

32. Children under nine years of age, and not in arms are to be carried at half fare rates, and infants in arms are to be carried free; school children are to have school tickets at the rate of 10 for 25 cents, only to be used between 8 a. m. and 5 p. m., and not on Saturdays.

33. The payment of a fare shall entitle the passenger to a continuous ride from any point on said railway to any other point on a main line or branch of said railway within the City limits; and to enable this service to be carried out, transfer arrangements must be made by the purchaser to meet with the approval of the City Engineer and the endorsation of the Council.

34. Police Constables in uniform, Detective Police Officers in the employ of the City, and (while a fire is in progress) members of the City Fire Department in uniform, shall be carried free.

35. The purchaser shall be liable to and shall indemnify the City against all damages arising out of the construction or operation of the said railway system.

Cars.

36. Cars are to be of the most approved design for service and comfort including heating, lighting, signal appliances, numbers and route boards. They must be kept clean inside and out, and shall not exhibit advertisements outside unless under permit from the City Engineer. The platforms must be provided with gates. Cars are to be used exclusively for the conveyance of passengers, unless otherwise permitted by the City Engineer, and smoking will only be allowed on the front platform of closed cars, and rear seat and platform of open cars.

37. Each car is to be in charge of a uniformed conductor, who shall clearly announce the names of cross streets as the cars reach them. Conductors shall not permit ladies or children to enter or leave the cars while the cars are in motion and shall only receive and discharge passengers on right or curb side of vehicle or double track routes. On branch or light suburban lines, where horse power is permitted, single horse cars may be run in charge of a uniformed driver.

38. Cars are not to be overcrowded (a comfortable number of passengers for each class of cars to be determined by the City Engineer, and approved by the City Council).

Stopping of Cars.

39. Cars shall only be stopped clear of cross streets, and midway between streets where distance exceeds, 600 feet. Cars to have right of way and vehicles or persons not to obstruct or delay their operation.

Sunday Cars.

40. No cars shall be run on the Lord's Day until a Sunday service has been approved of by the citizens by a vote taken on the question.

WORKMEN.

41. No employee shall be compelled to work in the service of the railway for a longer period than 10 hours per day, or than 60 hours per week, or on more than 6 days per week, and no adult employed in the service of the railway shall be paid less than 15 cents per hour.

42. Nothing herein contained shall be taken as conferring upon the purchaser any right to construct or operate underground, overhead or elevated railways in the City of Toronto, or a surface railway on the Island, and the right to construct or operate, or to authorize the construction or operation of such railways in the said City, or in any part thereof, is hereby expressly reserved.

43. In case of any dispute or difference of opinion arising during the term of this contract between the purchaser and the City as to the meaning or construction of this specification, or of the contract to be prepared as herein provided, the same shall be determined on summary application after two clear days' notice to the other party by the person who, for the time being, fills the office of Judge of the County Court of the County of York, who may, as arbitrator, determine the same with the powers, as to costs and otherwise, of arbitrators under the Municipal Act, with right to appeal to the High Court of Justice for Ontario, whose decision shall be final.

44. The purchaser shall furnish to the City Engineer annually (on the first of January) a statement of tracks, cars, and all plant and appliances on hand on that date, together with the value of the same.

PENALTY.

45. A deposit in cash, marked cheque payable to the order of the City Treasurer, or other security, to the value of thirty thousand dollars ($30,000), and to the satisfaction of the City Treasurer, is to accompany each tender as a guarantee returnable by City if offer not accepted. In the case of the successful bidder, the amount of the deposit will be retained until a formal contract, with bonds, etc., in the usual form of City contracts, and to be approved by the City Solicitor, has been duly entered into, and will be forfeited to the City if the party fails to completely execute the contract within thirty days after notification to enter into same.

46. In case of neglect or failure on the part of the purchaser to perform any of the conditions of the contract to be entered into in accordance with the above specification, the purchaser shall in each such case of failure forfeit and pay to the City the sum of $10,000 as liquidated damages and not as a penalty.

47. The purchaser shall provide a waiting room near the corner of Front and York Streets (Union Station), suitable for the convenience of passengers taking the cars at this point.

N.B.—Persons who submit tenders on the foregoing specification may also submit offers or tenders on their own terms, and in such an event one deposit shall suffice. Persons may also submit offers or tenders on their own terms.

CITY ENGINEER'S OFFICE,

Toronto, May 6th, 1891.

AWARD OF THE ARBITRATORS *RE* THE TORONTO STREET RAILWAY

To whom all these presents shall come :

We, Edmund John Senkler, of the City of St. Catharines, in the County of Lincoln, and Province of Ontario, Judge of the County Court of the County of Lincoln, and Charles Henry Ritchie, of the City of Toronto, in the County of York, and Province of Ontario, one of Her Majesty's counsel, learned in the law, send greeting :

Whereas the Corporation of the City of Toronto, by notice in writing bearing date the twenty-third day of November, A.D. 1889, and under the corporate seal of the said the Corporation of the City of Toronto, and the hand of Edward Frederick Clarke, Esquire, M.PP., Mayor of the said City, and Richard Theodore Coady, Esquire, Treasurer of the said the Corporation of the City of Toronto, and keeper of the City seal, addressed to the Toronto Street Railway Company, and served upon the said the Toronto Street Railway Company upon the said twenty-third, day of November, A.D. 1889, did require the said the Toronto Street Railway Company to take notice that the Corporation of the City of Toronto intended, at the expiration of the term of the franchise granted to Alexander Easton, Esquire, by certain resolutions adopted by the Municipal Council of the said Corporation on the fourteenth day of March, 1861, and by a certain agreement made on the twenty-sixth day of March, 1861, between the Corporation of the City of Toronto and Alexander Easton, and by a certain By-law of the said Corporation passed on the twenty-second day of July, 1861, and numbered 353 (and which franchise the said Company then claimed the right to exercise), and also of certain other franchises subsequently granted by the said Municipal Council at different times for the said term to the Toronto Street Railway Company, to assume the ownership of the railways of the said Company, and of all real and personal property in connection with the working thereof, on payment of their value to be determined by arbitration.

And whereas by an order made in the High Court of Justice, Chancery Division, by the Honorable the Chancellor of Ontario, on Wednesday, the eighteenth day of June, A.D. 1890, in the matter of an arbitration between the Corporation of the City of Toronto and the Toronto Street Railway Company, and in the matter of the Acts of the Legislature of the Province of Ontario, 52 Victoria, Chapter 13, and 53 Victoria, Chapter 105, upon motion that day made unto the said Court by Mr. Robinson, Q.C., of counsel for the Corporation of the City of Toronto, and upon reading the affidavit of C. R. W. Biggar, Q.C., a certain notice served by the said City of Toronto on the said Toronto Street Railway Company on the twenty-third day of November, 1889 (being the notice hereinbefore recited), the affidavit of Patrick Joseph McCormack, being the affidavit of service of such notice, and upon reading the notice of motion therein, and a certain agreement made between one Alexander Easton and the said the Corporation of the City of Toronto, on the twenty-sixth day of March, A.D. 1861, (being the agreement mentioned and referred to in said notice), and upon hearing counsel, the Honorable the Chancellor of Ontario did, pursuant to the statute firstly above named by the said order, appoint Edmund John Senkler, of the City of St. Catharines, Judge of the County Court of the County of Lincoln, Samuel Barker, Esquire, and Charles Henry Ritchie, one of Her Majesty's counsel learned in the law, the arbitrators to ascertain the value to be determined by arbitration under the said agreement.

And whereas the said arbitrators duly took upon themselves the burthen of the said reference and arbitration, and duly weighed and considered the several allegations made by and on behalf of the said the Corporation of the City of Toronto and the said the Toronto Street Railway Company, the parties thereto and also the proofs, vouchers and documents which have been given in evidence before them.

Now, therefore, we the said Edmund John Senkler, and Charles Henry Ritchie, being two of the above-named arbitrators (Samuel Barker, the other of said arbitrators not joining in this award, although present at the making thereof), do hereby make and publish this our award of and concerning the matters so referred to us as aforesaid, in manner following, that is to say:

We find, award, adjudge and determine the value of the railways of the said Toronto Street Railway Company, and of all real and personal property in connection with the working thereof, to be the sum of one million, four hundred and fifty-three thousand, seven hundred and eighty-eight dollars ($1,453,788).

We further find, award, adjudge and determine that the said railways, and the said real and personal property so valued by us, consist of and include all the railways, and all the real and personal property specified or mentioned in the schedule hereunto annexed, and also all other railways belonged to or worked or constructed by the Toronto Street Railway Company within the City of Toronto aforesaid, and all other real and personal property of the Toronto Street Railway Company used or intended to be used in connection with their said railways or any of them, and that the above-mentioned sum so found by us is the value of all said railways, and of all said real and personal property free and clear and fully and completely exonerated and forever discharged of and from all mortgages, debentures, bonds, debts, liens, encumbrances, claims and demands whatsoever either at law or in equity, and of every nature and kind whatsoever.

We are of opinion that upon the true construction of the agreement of the twenty-sixth March, 1861, between the Corporation of the City of Toronto and Alexander Easton, and the resolutions recited therein, the right and privilege to construct, maintain and operate street railways upon certain streets in the City of Toronto was granted to the said Easton for the period of thirty years from the date therein mentioned only, and not in perpetuity, and that all street railways constructed in the City of Toronto by said Easton, or by the Toronto Street Railway Company, have been constructed and operated under privileges for the same term of thirty years and not in perpetuity, and in valuing said railways we have valued the same as being railways in use, capable of being, and intended to be used and operated as street railways, but have not allowed anything for the value of any privilege or franchise extending beyond said period of thirty years, as we consider no privilege or franchise exists beyond that period.

We are also of opinion that on the true construction of the agreement of the nineteenth January, 1889, between the Toronto Street Railway Company and the Corporation of the City of Toronto, the Company is not entitled to be paid for permanent pavements constructed by the City subsequent to the thirty-first December, 1888, and we also think that such pavements cannot be considered as having been constructed or paid for by the Company as to entitle it to any allowance therefor under the fifth section of chapter fifty-eight, fortieth Victoria (Statutes of Ontario), and we have therefore not allowed anything in respect thereof. In valuing the pavements constructed prior to the first January, 1889, we have not made any deduction in respect of used life of such last mentioned pavements subsequent to that date, as having regard to the terms of the said Agreement of the nineteenth January, 1889, we do not think any such deduction should be made.

It was shown in evidence before us that the property valued by us is (in whole or in part) subject to the following encumbrances, that is to say: Debentures issued by the Toronto Street Railway Company under the authority of the Act (Statutes of Ontario) forty-seventh Victoria, chapter seventy-seven, for the principal sum of six hundred thousand dollars, payable on the first July, 1914, and bearing interest at the rate of six per cent. per annum, payable half-yearly.

Mortgage in favor of one Platt for eight thousand dollars (principal money), payable on the first July, 1892, with interest at the rate of six per cent. per annum.

Mortgage in favor of one Crowther for one thousand seven hundred dollars (principal money), payable on the twenty-eighth of April, 1891, with interest at the rate of six per cent. per annum.

Mortgage in favor of one Gooderham for twenty-six thousand dollars (principal money), payable on the first November, 1891, with interest at the rate of five per cent. per annum.

Mortgage in favor of one Allen for two thousand five hundred dollars (principal money), payable on the twenty-second December, 1891, with interest at the rate of six per cent. per annum.

And mortgage in favor of one Parsons for two thousand dollars (principal money), payable on the first day of November, 1891, with interest at the rate of six per cent. per annum.

By sub-section two of section two of chapter one hundred and five, fifty-three Victoria (Statutes of Ontario), it is provided as follows:

"2. Nothing in this Act contained shall affect the rights of the holders of the debentures hereinbefore issued under the Act of this Legislature, 47 Victoria, chapter 77, but in the event of the Corporation of the City of Toronto taking such possession, such debentures shall be and continue a first charge upon the said railway and property as declared by that Act, whether the same are retained by the Corporation of the City of Toronto or are sold or leased by them to any other persons or company, but this declaration shall not be held or taken to prejudice or affect any claim which, on the part of the City of Toronto, may be contended for before the arbitrator or abitrators as to the amount at which the liability created by the said debentures shall be estimated or valued in calculating the amount to be paid to the Company, by or under the award."

And counsel for the City contended before us that under the original Agreement, coupled with this section, it was our duty to ascertain and determine what amount should be deducted from the value of the property in respect of the differences between the rates of interest borne by the said debentures and mortgages, and the rate at which the City could borrow money on its own debentures, and adduced evidence to show that the City could, on its own debentures, borrow money at a considerably lower rate than six per cent. per annum.

Although we do not regard the matter as being free from doubt, we are inclined to the opinion that the decision of this question does not come properly within the scope of the reference to us, and therefore we have not taken it into consideration, and our award is made without reference to it.

We have thought it proper, in respect of the main questions of principle involved, to state on the face of the award the basis upon which we have proceeded in arriving at our valuation, so that if the conclusions of law we have drawn and upon what we have acted, are erroneous, either party may be in a position to seek such redress as the law may allow.

In witness thereof we the said Edmund John Senkler and Charles Henry Ritchie (being a majority of the said arbitrators), have hereunto set our hands this fifteenth day of April, A. D. one thousand eight hundred and ninety-one.

(Signed) E. J. Senkler.
(Signed) C. H. Ritchie.

Signed and published the fifteenth day of April, A. D. 1891, by the said Edmund John Senkler and Charles Henry Ritchie (the above-mentioned Samuel Barker being present at the time although not joining in the award), in presence of

(Signed) J. F. Middleton.

SCHEDULE.

Referred to in Annexed Award, containing list of the Real and Personal Property included in Valuation made by Arbitrators.

1. All railway tracks of the Toronto Street Railway Company now on the streets of the City of Toronto, including curves, switches, cross-overs and turnouts, stated to be 68.72 miles measured in single track.

2. The interest of the said Company in all pavements and roadbeds on the streets of said City (basis of valuation of which is shown in award).

3. Lands, including all buildings and erections thereon.

(*a*) That freehold property of the Toronto Street Railway Company on the south-east corner of Front and Frederick Streets, in the City of Toronto, having a frontage of two hundred feet on the south side of Front Street, a frontage of two hundred feet and five inches on the north side of Esplanade Street, and a frontage of four hundred and fifty-three on the east side of Frederick Street, excepting thereout the lot known as the Currie lot, having a frontage on Frederick Street of eighty feet and two inches by a depth of sixty-six feet.

(*b*) That freehold property of the said Company on the south-west corner of Front and George Streets, in said City, having a frontage of one hundred and thirty-eight feet and five inches on the south side of Front Street, a frontage of four hundred and forty-three feet and three inches on the west side of George Street, and a frontage of one hundred and thirty-four feet and three inches on the north side of Esplanade Street.

(*c*) That freehold property of the said company on the north-west corner of Front and Frederick Streets, in said City, having a frontage of one hundred and thirty-six feet on the north side of Front Street, and a depth of one hundred and thirty-six feet and nine inches on the west side of Frederick Street.

(*d*) That freehold property of the said Company on the south-east corner of King and St. Lawrence Streets, in said City, having a frontage of two hundred feet on the south side of King Street, and a frontage of one hundred and ninety-three feet and nine inches on the east side of St. Lawrence Street.

(*e*) That leasehold property of the said Company on the north side of St. Lawrence Street, occupied by them in connection with the freehold property lastly above described, and held by the said Company under lease from the trustees of the Toronto General Hospital.

(*f*) That freehold property of the said Company on the south side of Scollard Street, in said City, commencing on the south side of Scollard Street at a point distant one hundred and seventy feet westerly from the west side of Yonge Street, and running westerly from that point three hundred feet, and having a uniform depth of seventy-five feet and eight inches, together with the leasehold property of the said Company adjoining the same and used in connection therewith.

(*g*) That freehold property of the said Company on the north side of Yorkville Avenue, in said City, commencing at a point on the north side of Yorkville Avenue three hundred and seventy feet westerly from the west side of Yonge Street and running from that point westerly one hundred feet, and having a uniform depth of one hundred and sixty-five feet and eleven inches.

(*h*) That freehold property of the said Company on the west side of Yonge Street, in the block between Davenport Road and Belmont Street, in said City, known as lot number four, registered plan 270, having a frontage of ninety-seven feet six inches, on Yonge Street, and running back to a lane.

4. Rolling stock :

(*a*) Cars—90 two-horse cars (closed), including the twelve original cars purchased by the company ; 56 open cars ; 116 one-horse cars.

(*b*) Busses—56 busses (Stephenson, N.Y., make) ; 43 other busses.

(*c*) Sleighs—40 car sleighs (Speight & Son, makers) ; 60 car sleighs (T. S. R. Co. make).

5. Horses—The 1,372 horses belonging to the Company and referred to in Schedules filed before arbitrators.

6. Harness, machinery in mill and miscellaneous chattels appearing in Schedules filed before arbitrators, the value of which has been fixed by the parties of the reference at fifty-one thousand dollars, pursuant and subject to agreement between them appearing at page 68 of volume 7 of the shorthand reporter's notes of evidence taken before arbitrators, which value the arbitrators have adopted.

7. Tracks in Company's buildings, the value of which has been agreed upon by the parties, and adopted by the arbitrators.

8. Horse feed on hand, valued at ten thousand dollars.

9. Chattels enumerated in Exhibit 188 filed before us, the value of which has been agreed upon by the parties and adopted by the arbitrators.

(Signed) E. J. Senkler.

(Signed) C. H. Ritchie.

Witness :

J. F. Middleton.

SCHEDULE A.

Toronto Street Railway.

Length of Tracks in Operation. Length of Tracks Constructed but not in Operation. Length of Tracks to be Constructed.

Street.	From	To	In Operation.		Constructed, not Operat'd	To be Constructed.	
			Single.	Double.	Double.	Single.	D'ble.
			feet.	feet.		feet.	feet.
Front	Frederick	Simcoe	370	4,632			
King	Don	Roncesvalles.		16,335	4,243		4,300
Queen	Lee Av	High Park	2,202	33,747			2,230
College	Yonge	Jameson		13,479			2,386
Carlton	"	Parliament		4,036			
Gerrard	Greenwood	"	650	1,450		650	8,686
Winchester	Sumach	"	1,454				
Bloor	Sherbourne	Roncesvalles.			15,932		4,700
Broadview	Queen	Danforth		6,826			
Parliament	"	Winchester	301	3,504			
Elm Av.	Sherbourne	Glen Road				2,900	
Sherbourne	King	North Drive.		8,095			2,950
Frederick	"	Front	103	146			
George	"	"		252			
Church	Front	Bloor		8,532			
Yonge	"	C. P. Railway	148	12,764			
York	"	Queen		2,144			
McCaul	College	"		3,338			
Spadina	King	Bloor	113	7,930			
Bathurst	"	C. P. Railway		11,302			
Strachan	"	Wellington		394			
Dundas	Queen	Jameson	1,029	5,843			
Dovercourt	College	C. P. Railway		2,846		3,300	
Dufferin and	Union	Bloor				4,980	
		Feet	6,370	152,595	20,175	11,750	25,752
		Miles	1.20	28.90	3.82	2.22	4.88

Summary.

Single tracks in operation	1.20 miles	
Double tracks reduced to single in operation	57.80 "	
Curves reduced to single in operation	1.36 "	
Cross-overs in operation	0.71 "	
		61.07 miles.
Double tracks reduced to single, constructed but not operated		7.64 "
Double tracks to be constructed (reduced to single)		9.76 "
Single tracks to be constructed		2.22 "
Grand total		80 69 miles.

DESCRIPTION OF TRACK.

Showing Different Kinds of Construction Laid on Streets.

Street.	30-lb. rail. 5″x6″ stringer 4″x6″ tie.	30-lb. rail. 5″x8″ stringer 4″x6″ tie.	25-lb. rail. 5″x6″ stringer 4″x6″ tie.	25-lb. rail, 5″x8″ stringer 4″x6″ tie.	22-lb. rail. 5″x6″ stringer 4″x6″ tie.
	feet.	feet.	feet.	feet.	feet.
Front	.....	8,111	1,311	.....	212
King	14,513	.....	5,199	.....	21,521
Queen	47,354	.....	32,343	.....	.....
College	8,933	13,472	4,555	.....	.....
Carlton	.....	8,072	.....	.....	.....
Gerrard	1,393	.....	2,157	.....	.....
Winchester	704	.....	750	.....	.....
Bloor	.....	31,864	.....	.....	.....
Broadview Av	.....	13,652	.....	.....	.....
Parliament	4,658	.....	2,652	.....	.....
Sherbourne	.....	16,190	.....	.....	.....
Frederick	.....	.....	396	.....	.....
George	504	.....	.....	.....	.....
Church	.....	7,351	.....	9,713½	.....
Yonge	.....	7,321	9,325	9,030	.....
York	.....	4,288	.....	.....	.....
McCaul	.....	6,677	.....	.....	.....
Spadina Av	.....	3,091	.....	12,883	.....
Bathurst	.....	22,605	.....	.....	.....
Strachan Av	161	.....	628	.....	.....
Dundas	526	7,305	2,228	2,648	.....
Dovercourt	.....	5,692	.....	.....	.....
Single track { Feet	70,260	134,477	61,554	34,274	21,733
Single track { Miles	13.11	31.28	11.65	6.49	4.11

NOTE.—Gauge of tracks, 4 ft. 11 in. ; devil's strip, 3 ft. Ties and stringers are of pine. The ties are spaced 5 ft. between centres, and are 4 in. x 6 in. x 7 ft. long. Stringers are spiked to ties with 9 in. x ½ in. spikes, one through each tie, and placed on the outside of stringers only.

Joint knees weigh 5 lbs. each, and intermediate 2 lbs. 1 oz. each. There are 9½ miles of iron rails, the balance are of steel. All curves, switches and diamond crossings are of cast iron.

Road Beds of the Toronto Street Railway.

Showing the Number of Miles of each kind of Pavement for Single and Double Tracks laid on Streets.

Note.—The width for single tracks is 8 ft. 4 in., and for double 16 ft. 8 in. Length of pavements on streets are in lineal feet.

Street.	Cedar and Cobble.	Cedar Block.	Asphalt and Scoria Blocks.	Sandstone Setts on Sand.	Scoria Blocks on Concrete.	Granite Setts on Concrete.	Cobble with Stone Kerbs.	Cobble.	Granite Setts on Sand.	M'cad'm (M) and Gravel (G).
	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.
Front								(*s*) 370 (*d*) 2,115	(*d*) 2,319	
King	(*d*) 808	(*d*) 12,619			(*d*) 1,845			(*d*) 52	(*d*) 4,737	
Queen	(*d*) 8,010	(*s*) 2,090 (*d*) 22,910						(*d*) 3,850		(*d*) 4,049 G
College		(*d*) 6,755						(*d*) 6,735		
Carlton		(*d*) 4,054								
Gerrard										(*d*) 1,5 8 M (*s*) 650 M
Winchester										(*s*) 1,466 M
Bloor			(*d*) 2,642						(*d*) 11,615	
Broadview Ave		(*d*) 6,838								
Parliament		(*d*) 2,499						(*d*) 879		(*s*) 406
Sherbourne						(*d*) 8,107				
Frederick								(*s*) 115 (*d*) 158		
George								(*d*) 284		
Church				(*d*) 8,544						
Yonge		(*s*) 148 (*d*) 11,964						(*d*) 800		
York		(*d*) 2,168								
McCaul		(*d*) 3,362								
Spadina Av		3,539					(*s*) 113 (*d*) 3,311		(*d*) 1,139	
Bathurst		3,265					(*d*) 3,132	(*d*) 1,175	(*d*) 3,291	
Strachan Av										(*d*) 406
Dundas		(*s*) 870 (*d*) 1,033					(*d*) 5,057			
Dovercourt Rd							(*d*) 2,798	(*s*) 3,300		
Total double track	8,818	81,006	2,642	8,544	1,845	8,107	14,298	15,248	23,901	(*d*) 1,934 M
Road bed, miles	1.67	15.39	0.50	1.61	0.35	1.53	2.71	2.89	4.53	0.36
Total single track		3.008					113	3,785		(*s*) 2,522 M 0.48
Road bed, miles		0.59					0.02	0 72		(*d*) 4,049 G 0.77

(*d*) Double track. (*s*) Single track.

TENDERS OF KIELY, EVERETT AND McKENZIE.

No. 1.

Annual Percentages of Gross Receipts.

1. Up to $1,000,000, 7 1-10 per cent.

2. From $1,000,000 to $1,500,000, 8 1-10 per cent.

3. From $1,500,000 to $2,000,000, 9 1-10 per cent.

4. From $2,000,000 to $2,500,000, 10 1-10 per cent., and advancing 1 per cent. on each additional $500,000.

5. If the City guarantee bonds at 4 per cent., 1 per cent. a year on the amount to be paid to the City for the guarantee.

No. 2.

6. If class of tickets 8 for 25 cents struck out, an additional 2 per cent. per annum on gross receipts to be added to each of said annual percentages.

No. 3.

7. If paragraph 9 struck out, an annual payment of $136,000; if paragraph 9 and tickets 8 for 25 cents both struck out, an annual payment of $151,000.

(Signed) G. W. Kiely.
(Signed) Wm. McKenzie.
(Signed) Henry A. Everett.

Tender No. 1

Of George W. Kiely, of Toronto, 580 Jarvis Street; William McKenzie, of Toronto, 623 Sherbourne Street; and Henry A. Everett, of Cleveland, Ohio, Secretary of East Cleveland Railway Company (electric), for the privileges to be disposed of by the Corporation of the City of Toronto under the amended conditions for the privilege of operating surface street railways within the limits of the City of Toronto, as adopted by the City Council May 5th, 1891.

We, the said George W. Kiely, William McKenzie and Henry A. Everett, called Purchasers under the said conditions, respectfully submit to the Corporation of the City of Toronto the following Tender, based upon the said conditions (a copy of which is hereto annexed).

1. We offer to pay to the Corporation of the City of Toronto under Section 9, 7 1-0 per cent. per annum of the gross receipts in addition to the other money provided for in said section.

2. And we, the said Purchasers, further offer that should the said gross receipts described as aforesaid be in excess of $1,000,000, and not greater than $1,500,000 then the Purchasers will pay on any excess over $1,000,000, 8 1-0 per cent. per annum on said gross earnings to the said City of Toronto.

3. And we, the said Purchasers, further offer that should the said gross receipts be in excess of $1,500,000 and not greater than $2,000,000, then the Purchasers will pay on any excess over $1,500,000, 9 1-10 per cent per annum of said gross earnings to the said City of Toronto, and the further sum of one per cent. per annum upon each additional $500,000.

4. And we, the said Purchasers, further offer that if the City of Toronto shall procure the necessary legislation to guarantee debentures bearing four per cent. interest proposed to be issued by said Purchasers to an amount not to exceed in the aggregate the sum of $2,000,000, the said sum or any part thereof to be used solely for the purpose of equipping the street railroad with the improvements contemplated by the said specifications, we, the said Purchasers, will pay to the City of Toronto, in addition to the sums hereinbefore enumerated, an additional

sum of money equal in amount to one per cent per annum on the amount of debentures issued by said Purchasers and guaranteed in the manner hereinbefore provided.

This Tender is made upon the faith that an electric railway system will be approved and confirmed under Section 24 of the specifications, unless some new system shall in the meantime be devised for the operation of street railways which is not more expensive and is equally commercially successful with known electric system.

This Tender is to apply to the Purchasers or to any company incorporated by them for the purpose of carrying out this Tender.

Respectfully submitted.

(Signed) G. W. KIELY.
(Signed) WM. MCKENZIE.
(Signed) HENRY A. ETERETT.

Dated at Toronto this 26th day of May, A. D. 1891.

TENDER NO. 2.

Of George W. Kiely, of Toronto, 580 Jarvis Street; Wm. McKenzie, of Toronto, 623 Sherbourne Street; and Henry A. Everett, of Cleveland, Ohio, Secretary of East Cleveland Railway Company (electric), for the privileges to be disposed of by the Corporation of the City of Toronto under the amended conditions for the privilege of operating surface street railways within the limits of the City of Toronto, as adopted by the City Council, May 5th 1891.

We the said George W. Kiely, William McKenzie and Henry A. Everett (called Purchasers under the said conditions), respectfully submit to the Corporation of the City of Toronto the following alternative tender based upon the aforesaid specifications:

They repeat all the allegations of their Tender No. 1 and make them a part hereof as fully as though they were herein written, but modified as follows, to wit:

That if the City of Toronto will eliminate from Clause 31 of the specifications the words, "A class of tickets must be sold at the rate of eight for twenty-five cents, the same to be used only by passengers entering the cars between the time the day cars commence running and 8 a. m., and between 5 and 6.30 p. m," the said Purchasers offer to pay to the City of Toronto two per cent. of the gross receipts in addition to the percentages that they have offered to pay under their Tender No. 1.

Respectfully submitted.

(Signed) G. W. KIELY.
(Signed) WM. MCKENZIE.
(Signed) HENRY A. EVERETT.

Dated at Toronto this 26th day of May, A. D. 1891.

TENDER NO. 3.

Of George W. Kiely, of Toronto, 580 Jarvis Street; William McKenzie, of Toronto, 623 Sherbourne Street; and Henry A. Everett, of Cleveland, Ohio, Secretary of the East Cleveland Railway Company (electric), for the privileges to be disposed of by the Corporation of the City of Toronto under the amended conditions for the privilege of operating surface street railways within the limits of the City of Toronto, as adopted by the City Council, May 5th, 1891.

We, the said George W. Kiely, William McKenzie and Henry A. Everett called Purchasers under the said conditions), respectively submit the following alternative tender to the Corporation of the City of Toronto, based upon the said conditions (a copy of which is hereto annexed), subject to the following qualifications:

We hereby make our Tender No. 1 a part hereof as fully as though herein written, except as to Section No. 9 of the specifications, and that portion of Section No. 31 providing for eight tickets for twenty-five cents.

We offer, in lieu of Section No. 9 of the qualifications, to pay to the City of Toronto during the period covered by the purchase, the sum of $136,000 per annum, payable in four equal quarterly payments.

And we further offer that if the said portion of Section 31 providing for eight tickets for twenty-five cents shall also be eliminated, we will pay to the City of Toronto during the period covered by the purchase, the sum of $161,000 per annum, payable in four equal quarterly payments, the said sum of $151,000 to be in lieu of Section No. 9 and that portion of Section No. 31 providing for eight tickets for twenty-five cents.

Respectfully submitted.

(Signed) G. W. Kiely.
(Signed) Wm. McKenzie.
(Signed) Henry A. Everett.

Dated at Toronto this 26th day of May, 1891.

AMENDED TENDER OF KIELY, EVERETT & McKENZIE FOR THE TORONTO STREET RAILWAY.

Toronto, June 26th, 1891.

Alfred McDougall, Esq., Chairman of the Street Railway Committee, City:

Dear Sir,—At the meeting of the Street Railway Committee on the evening of the 25th inst. our clients decided to withdraw all their tenders and to consider whether they would substitute a fresh tender in the direction of the claims made by the Mayor and some of the Aldermen that the percentages should increase at a higher progressional ratio.

Our clients expected to have received their tenders and deposits this a.m., but we are informed by the Clerk and Treasurer that a formal resolution of the Council is necessary.

We enclose an amended tender which our clients have, after consideration, decided to make, and we confirm the former tenders, amended by the enclosed tender, in the rate of gross percentage, and we confirm the deposit of $30,000 as the deposit for security.

Yours respectfully,

[Signed) Kingsmill, Symonds, Saunders & Torrance.
Bain, Laidlaw & Co.

Toronto, 25th June, 1891.

To the Corporation of the City of Toronto and to Alfred McDougall, Esq., Chairman of the Street Railway Committee:

We, George W. Kiely, William McKenzie and Henry A. Everett, offer to buy the privilege of operating surface street railways in the City of Toronto on the basis of the amended conditions and to pay the following rates of percentages of annual gross receipts, namely:

(1)	Up to $1,000,000	8 per cent.
(2)	From 1,000,000 to $1,500,000	10 "
(3)	" 1,500,000 to 2,000,000	12 "
(4)	" 2,000.000 to 3,000,000	15 "
	All over $3,000,000	20 "

And we make this offer on condition that it shall be disposed of without any unnecessary delay.

Yours respectfully,

(Signed) G. W. Kieley,
Wm. McKenzie,
H. A. Everett.

BY-LAW AUTHORIZING EXECUTION OF AGREEMENT.

No. 2920. A By-Law.

To authorize a certain Agreement between Messrs. Kiely, Everett and McKenzie and the City of Toronto for the lease of the Toronto Street Railway.

[Passed July 27th, 1891.]

Whereas the Corporation of the City of Toronto has acquired the ownership of the railways of the Toronto Street Railway Co., and all the real and personal property in connection with the working thereof, and has asked, by public advertisement, for tenders from persons willing to acquire the said railways and the privilege of operating surface street railways in the City of Toronto.

And whereas George W. Kiely, Wm. McKenzie and Henry A. Everett have tendered for the acquisition of such railways, and the privilege of operating surface street railways, as shown by Report No. 12 of the Street Railway Committee and appendices thereto, which report was adopted by Council on the 21st day of July, 1891, and it is advisable that the tender of the said Messrs. Kiely, McKenzie and Everett, be accepted by the said Corporation.

Therefore the Municipal Council of the Corporation of the City of Toronto enacts as follows :

I.

That the Mayor and City Treasurer be authorized and empowered to execute and affix the City seal on behalf of the City to an agreement between the Corporation of the City of Toronto and the said Messrs. Kiely, McKenzie and Everett, based on the specifications and conditions for the privilege of operating surface street railways within the City of Toronto, as adopted by the City Council May 5th, 1891, and the said tender of the said Messrs. Kiely, McKenzie and Everett as contained in the appendix to said Report No. 12 of the said Street Railway Committee, provided that such agreement be drawn, settled and approved of by the City Solicitor and counsel learned in the law ; and provided further that the date of execution of the contract shall be taken to be the date of acceptance of the tender for the purpose of the second paragraph of the said conditions ; and provided further that no claims shall be made by Messrs. Kiely, Everett and McKenzie, or be allowed by this Council, for any depreciation of property during the time the City has charge of the said street railway.

I certify that I have examined this Bill and that it is correct.

JOHN BLEVINS,
City Clerk.

Council Chamber,
Toronto, July 27th, 1891.

[L. S.] E. F. CLARKE,
Mayor.

Witnesses :
Thomas Caswell,
Geo. Kappele.

(Signed) G. W. Kiely
Wm. McKenzie, by his Attorney, Nicol Kingsmill.
H. A. Everett.
C. C. Woodworth.

AFFIDAVIT OF EXECUTION.

PROVINCE OF ONTARIO,
County of York,
To Wit:

I, George Kappele, of the City of Toronto, in the County of York, Esquire, make oath and say:

1. That I was personally present and did see the foregoing Agreement and Award, Conditions, Tender and By-Law attached thereto, duly signed, sealed and executed in triplicate by the within named George Washington Kiely; William McKenzie, by his attorney, Nicol Kingsmill; Henry Azariah Everett, and Chauncey Clark Woodworth, four of the parties thereto.

2. That the said Agreement and Award, Conditions, Tender and By-Law attached thereto in triplicate were executed at the City of Toronto aforesaid.

3. That I know the said parties.

4. That I am a subscribing witness to the said Agreement and Award, Conditions Tender and By-Laws attached thereto in triplicate, and that the name "Geo. Kappele," subscribed to the said Agreement and Award, Conditions, Tender and By-Law attached thereto in triplicate, is in the proper handwriting of me this deponent.

Sworn before me at the City of Toronto, in the County of York, this first day of September, A.D. 1891.

C. R. W. BIGGAR,
A Commissioner for taking affidavits, etc.

GEO. KAPPELE.